

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2019

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission file number: 001-34501

JUNIPER NETWORKS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

77-0422528

(I.R.S. Employer Identification No.)

1133 Innovation Way

Sunnyvale, California

(Address of principal executive offices)

94089

(Zip code)

(408) 745-2000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.00001 per share	JNPR	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

There were 345,815,689 shares of the Company's Common Stock, par value \$0.00001, outstanding as of August 5, 2019 .

Juniper Networks, Inc.

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PART I — FINANCIAL INFORMATION
Item 1. Financial Statements (Unaudited)

Juniper Networks, Inc.				
Condensed Consolidated Statements of Operations				
(In millions, except per share amounts)				
(Unaudited)				
	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net revenues:				
Product	\$ 713.9	\$ 824.9	\$ 1,332.6	\$ 1,535.7
Service	388.6	379.2	771.6	751.0
Total net revenues	1,102.5	1,204.1	2,104.2	2,286.7
Cost of revenues:				
Product	314.3	336.6	584.3	643.0
Service	151.4	166.6	300.8	324.4
Total cost of revenues	465.7	503.2	885.1	967.4
Gross margin	636.8	700.9	1,219.1	1,319.3
Operating expenses:				
Research and development	244.0	248.8	471.6	518.2
Sales and marketing	229.0	238.3	457.5	477.7
General and administrative	60.0	54.2	128.2	110.2
Restructuring charges (benefits)	21.4	(0.2)	36.7	(2.1)
Total operating expenses	554.4	541.1	1,094.0	1,104.0
Operating income	82.4	159.8	125.1	215.3
Other expense, net	(4.6)	(8.9)	(2.8)	(23.0)
Income before income taxes	77.8	150.9	122.3	192.3
Income tax provision	31.6	34.4	45.0	41.4
Net income	\$ 46.2	\$ 116.5	\$ 77.3	\$ 150.9
Net income per share:				
Basic	\$ 0.13	\$ 0.33	\$ 0.22	\$ 0.43
Diluted	\$ 0.13	\$ 0.33	\$ 0.22	\$ 0.42
Shares used in computing net income per share:				
Basic	346.3	349.0	347.2	352.2
Diluted	349.1	351.3	351.7	356.8

See accompanying Notes to Condensed Consolidated Financial Statements

Juniper Networks, Inc.

Condensed Consolidated Statements of Comprehensive Income
(In millions)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net income	\$ 46.2	\$ 116.5	\$ 77.3	\$ 150.9
Other comprehensive (loss) income, net of tax:				
Available-for-sale debt securities:				
Change in net unrealized gains and losses, net of tax (provision) of (\$0.2) and (\$0.8) during the three and six months ended June 30, 2019, respectively, and tax (provision) benefit of (\$0.2) and \$1.2 for the comparable periods in 2018, respectively	2.0	0.5	3.8	(1.5)
Net realized losses reclassified into net income, net of tax provisions of zero for each period	—	—	—	0.9
Net change on available-for-sale debt securities, net of tax	2.0	0.5	3.8	(0.6)
Cash flow hedges:				
Change in net unrealized gains and losses, net of tax benefit (provision) of \$0.2 and (\$1.1) during the three and six months ended June 30, 2019, respectively, and tax benefits of \$1.5 and \$1.2 for the comparable periods in 2018, respectively	(1.8)	(14.4)	0.3	(1.3)
Net realized (gains) and losses reclassified into net income, net of tax provisions of \$0.6 and \$0.8 during the three and six months ended June 30, 2019, respectively, and tax provision of \$0.2 and \$0.8 for the comparable periods in 2018, respectively	0.3	(3.0)	1.5	(8.1)
Net change on cash flow hedges, net of tax	(1.5)	(17.4)	1.8	(9.4)
Change in foreign currency translation adjustments	(0.9)	(12.0)	1.3	(6.7)
Other comprehensive (loss) income, net of tax	(0.4)	(28.9)	6.9	(16.7)
Comprehensive income	\$ 45.8	\$ 87.6	\$ 84.2	\$ 134.2

See accompanying Notes to Condensed Consolidated Financial Statements

Juniper Networks, Inc.
Condensed Consolidated Balance Sheets
(In millions, except par values)

	June 30, 2019	December 31, 2018
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 1,381.3	\$ 2,489.0
Short-term investments	1,418.9	1,070.1
Accounts receivable, net of allowances	659.4	754.6
Prepaid expenses and other current assets	299.0	268.1
Total current assets	3,758.6	4,581.8
Property and equipment, net	870.0	951.7
Operating lease assets	176.7	—
Long-term investments	74.8	199.0
Purchased intangible assets, net	205.6	118.5
Goodwill	3,338.3	3,108.8
Other long-term assets	479.3	403.5
Total assets	\$ 8,903.3	\$ 9,363.3
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 183.3	\$ 208.8
Accrued compensation	207.5	221.0
Deferred revenue	820.0	829.3
Short-term portion of long-term debt	299.5	349.9
Other accrued liabilities	255.9	233.5
Total current liabilities	1,766.2	1,842.5
Long-term debt	1,490.5	1,789.1
Long-term deferred revenue	381.4	384.3
Long-term income taxes payable	409.1	404.4
Long-term operating lease liabilities	167.5	—
Other long-term liabilities	97.4	119.8
Total liabilities	4,312.1	4,540.1
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Convertible preferred stock, \$0.00001 par value; 10.0 shares authorized; none issued and outstanding	—	—
Common stock, \$0.00001 par value; 1,000.0 shares authorized; 344.5 shares and 346.4 shares issued and outstanding as of June 30, 2019 and December 31, 2018, respectively	—	—
Additional paid-in capital	7,491.2	7,672.8
Accumulated other comprehensive loss	(11.3)	(18.2)
Accumulated deficit	(2,888.7)	(2,831.4)
Total stockholders' equity	4,591.2	4,823.2
Total liabilities and stockholders' equity	\$ 8,903.3	\$ 9,363.3

See accompanying Notes to Condensed Consolidated Financial Statements

Juniper Networks, Inc.
Condensed Consolidated Statements of Cash Flows
(In millions)
(Unaudited)

	Six Months Ended June 30,	
	2019	2018
Cash flows from operating activities:		
Net income	\$ 77.3	\$ 150.9
Adjustments to reconcile net income to net cash provided by operating activities:		
Share-based compensation expense	89.6	127.0
Depreciation, amortization, and accretion	101.7	110.9
Operating lease assets expense	21.3	—
Other	0.4	1.5
Changes in operating assets and liabilities, net of acquisitions:		
Accounts receivable, net	102.3	147.5
Prepaid expenses and other assets	(55.2)	(26.5)
Accounts payable	(28.1)	(28.8)
Accrued compensation	(15.8)	15.8
Income taxes payable	(3.8)	(77.7)
Other accrued liabilities	(20.1)	(27.5)
Deferred revenue	(21.4)	48.3
Net cash provided by operating activities	248.2	441.4
Cash flows from investing activities:		
Purchases of property and equipment	(55.2)	(79.3)
Purchases of available-for-sale debt securities	(1,760.0)	(114.4)
Proceeds from sales of available-for-sale debt securities	628.5	995.4
Proceeds from maturities and redemptions of available-for-sale debt securities	906.0	289.9
Purchases of equity securities	(9.4)	(6.3)
Proceeds from sales of equity securities	4.1	29.5
Subsequent payments related to acquisitions in prior years	—	(31.5)
Payments for business acquisitions, net of cash and cash equivalents acquired	(270.9)	—
Net cash (used in) provided by investing activities	(556.9)	1,083.3
Cash flows from financing activities:		
Repurchase and retirement of common stock	(303.8)	(754.2)
Proceeds from issuance of common stock	29.7	29.5
Payment of dividends	(131.7)	(124.9)
Change in customer financing arrangement	—	(16.3)
Payment of debt	(350.0)	—
Other	—	(0.5)
Net cash used in financing activities	(755.8)	(866.4)
Effect of foreign currency exchange rates on cash, cash equivalents, and restricted cash	2.1	(5.4)
Net (decrease) increase in cash, cash equivalents, and restricted cash	(1,062.4)	652.9
Cash, cash equivalents, and restricted cash at beginning of period	2,505.8	2,059.1
Cash, cash equivalents, and restricted cash at end of period	\$ 1,443.4	\$ 2,712.0

See accompanying Notes to Condensed Consolidated Financial Statements

Juniper Networks, Inc.

Condensed Consolidated Statements of Changes in Stockholders' Equity
(In millions, except per share amounts)
(Unaudited)

Three Months Ended June 30, 2019					
	Shares	Common Stock and Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at March 31, 2019	352.0	\$ 7,668.6	\$ (10.9)	\$ (2,806.5)	\$ 4,851.2
Net income	—	—	—	46.2	46.2
Other comprehensive loss, net	—	—	(0.4)	—	(0.4)
Issuance of common stock	1.1	0.2	—	—	0.2
Common stock assumed upon business combination	—	4.7	—	—	4.7
Repurchase and retirement of common stock	(8.6)	(112.5)	—	(128.4)	(240.9)
Purchase of forward contract under accelerated share repurchase program ("ASR")	—	(60.0)	—	—	(60.0)
Share-based compensation expense	—	55.7	—	—	55.7
Payments of cash dividends (\$0.19 per share of common stock)	—	(65.5)	—	—	(65.5)
Balance at June 30, 2019	344.5	\$ 7,491.2	\$ (11.3)	\$ (2,888.7)	\$ 4,591.2

Three Months Ended June 30, 2018					
	Shares	Common Stock and Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
Balance at March 31, 2018	349.0	\$ 7,615.5	\$ 12.5	\$ (3,303.3)	\$ 4,324.7
Net income	—	—	—	116.5	116.5
Other comprehensive loss, net	—	—	(28.9)	—	(28.9)
Issuance of common stock	0.4	0.2	—	—	0.2
Share-based compensation expense	—	56.9	—	—	56.9
Payments of cash dividends (\$0.18 per share of common stock)	—	(62.8)	—	—	(62.8)
Cumulative adjustment upon adoption of Accounting Standards Update ("ASU") 2014-09 ("Topic 606"), net	—	—	—	11.1	11.1
Balance at June 30, 2018	349.4	\$ 7,609.8	\$ (16.4)	\$ (3,175.7)	\$ 4,417.7

See accompanying Notes to Condensed Consolidated Financial Statements

Juniper Networks, Inc.

Condensed Consolidated Statements of Changes in Stockholders' Equity (Continued)
(In millions, except per share amounts)
(Unaudited)

Six Months Ended June 30, 2019					
	Shares	Common Stock and Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2018	346.4	\$ 7,672.8	\$ (18.2)	\$ (2,831.4)	\$ 4,823.2
Net income	—	—	—	77.3	77.3
Other comprehensive income, net	—	—	6.9	—	6.9
Issuance of common stock	6.8	29.7	—	—	29.7
Repurchase and retirement of common stock	(8.7)	(113.9)	—	(129.9)	(243.8)
Common stock assumed upon business combination	—	4.7	—	—	4.7
Purchase of forward contract under ASR	—	(60.0)	—	—	(60.0)
Share-based compensation expense	—	89.6	—	—	89.6
Payments of cash dividends (\$0.38 per share of common stock)	—	(131.7)	—	—	(131.7)
Cumulative adjustment upon adoption of ASU 2017-12 ("Topic 815"), net	—	—	—	0.1	0.1
Cumulative adjustment upon adoption of ASU 2016-02 ("Topic 842"), net	—	—	—	(4.8)	(4.8)
Balance at June 30, 2019	344.5	\$ 7,491.2	\$ (11.3)	\$ (2,888.7)	\$ 4,591.2

Six Months Ended June 30, 2018					
	Shares	Common Stock and Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2017	365.5	\$ 8,042.1	\$ (5.4)	\$ (3,355.8)	\$ 4,680.9
Net income	—	—	—	150.9	150.9
Other comprehensive loss, net	—	—	(16.7)	—	(16.7)
Issuance of common stock	7.4	29.5	—	—	29.5
Repurchase and retirement of common stock	(23.5)	(314.4)	—	(289.8)	(604.2)
Purchase of forward contract under ASR	—	(150.0)	—	—	(150.0)
Share-based compensation expense	—	127.5	—	—	127.5
Payments of cash dividends (\$0.36 per share of common stock)	—	(124.9)	—	—	(124.9)
Cumulative adjustment upon adoption of ASU Topic 606, net	—	—	—	324.7	324.7
Reclassification of tax effects upon adoption of ASU 2018-02 ("Topic 220"), net	—	—	5.7	(5.7)	—
Balance at June 30, 2018	349.4	\$ 7,609.8	\$ (16.4)	\$ (3,175.7)	\$ 4,417.7

See accompanying Notes to Condensed Consolidated Financial Statements

Juniper Networks, Inc.

**Notes to Condensed Consolidated Financial Statements
(Unaudited)**

Note 1. Basis of Presentation

Basis of Presentation

The unaudited Condensed Consolidated Financial Statements of Juniper Networks, Inc. (the “Company” or “Juniper”) have been prepared in accordance with U.S. generally accepted accounting principles (“U.S. GAAP”) for interim financial information. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. The Condensed Consolidated Balance Sheet as of December 31, 2018 has been derived from the audited Consolidated Financial Statements at that date. In the opinion of management, all adjustments, including normal recurring accruals, considered necessary for a fair presentation have been included. The results of operations for the three and six months ended June 30, 2019 are not necessarily indicative of the results that may be expected for the year ending December 31, 2019, or any future period.

The information included in this Quarterly Report on Form 10-Q (“Report”) should be read in conjunction with the “Management's Discussion and Analysis of Financial Condition and Results of Operations,” “Risk Factors,” “Quantitative and Qualitative Disclosures About Market Risk,” and the Consolidated Financial Statements and footnotes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (the “Form 10-K”).

The preparation of the financial statements and related disclosures in accordance with U.S. GAAP requires the Company to make judgments, assumptions, and estimates that affect the amounts reported in the Condensed Consolidated Financial Statements and the accompanying notes. Actual results could differ materially from those estimates under different assumptions or conditions.

Juniper Networks, Inc.**Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)****Note 2. Summary of Significant Accounting Policies**

Except for the change in certain policies upon adoption of the accounting standards described below, there have been no material changes to the Company's significant accounting policies, compared to the accounting policies described in Note 2, *Significant Accounting Policies*, in Notes to Consolidated Financial Statements in Item 8 of Part II of the Form 10-K.

Recently Adopted Accounting Standards

Cloud Computing Arrangement: On January 1, 2019, the Company early adopted FASB ASU No. 2018-15 (Subtopic 350-40) *Intangibles — Goodwill and Other-Internal-Use Software: Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which provides guidance on a customer's accounting for implementation, set-up, and other upfront costs incurred in a cloud computing arrangement that is hosted by a service contract. The Company has adopted the standard prospectively, and the adoption did not have a material impact on all applicable implementation costs incurred after the adoption date.

Derivatives and Hedging: On January 1, 2019, the Company adopted FASB ASU No. 2017-12 (Topic 815) *Derivatives and Hedging — Targeted Improvements to Accounting for Hedging Activities*, and an amendment thereafter, which expands an entity's ability to hedge financial and nonfinancial risk components and amends how companies assess effectiveness as well as changes to the presentation and disclosure requirements. The Company adopted the standard under the modified retrospective approach, and its amendment and presentation and disclosure requirements on a prospective basis. The adoption did not have a material impact on the Condensed Consolidated Financial Statements. See Note 6, *Derivative Instruments* for additional disclosures required upon adopting the standard.

Amortization on Purchased Callable Debt Securities: On January 1, 2019, the Company adopted FASB ASU No. 2017-08 *Receivables—Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities*, which shortens the amortization period for the premium on certain purchased callable debt securities to the earliest call date. The standard will not impact debt securities held at a discount. The Company adopted the standard under the modified retrospective approach. The adoption did not have a material impact on the Condensed Consolidated Financial Statements.

Leases: On January 1, 2019, the Company adopted FASB ASU No. 2016-02, *Leases* (Topic 842), and the related subsequent amendments ("ASC 842"), which require recognition by the lessees of right-of-use ("ROU") assets and lease liabilities for most leases on the Company's Condensed Consolidated Balance Sheets. The Company adopted the new standard under the modified retrospective approach, and recorded a cumulative-effect adjustment to the opening balance of accumulated deficit as of the effective date. Under the modified retrospective method, financial results reported in periods prior to 2019 are unchanged. The Company elected the package of practical expedients, which did not require the reassessment of existing leases under the new guidance. The Company also elected not to separate non-lease components from lease components and to not recognize ROU assets and lease liabilities for short-term leases.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

The cumulative effect of the adjustments made to the Company's Condensed Consolidated Balance Sheet as of the adoption date is detailed as follows (in millions):

	<u>December 31, 2018</u>		<u>January 1, 2019</u>
	<u>As reported</u>	<u>Adjustments due to ASC</u> <u>842</u>	<u>As adjusted</u>
Assets:			
Prepaid expenses and other current assets	\$ 268.1	\$ (1.4)	\$ 266.7
Property and equipment, net	951.7	(42.9)	908.8
Operating lease assets	—	192.5	192.5
Other long-term assets	403.5	1.3	404.8
Total assets	\$ 9,363.3	\$ 149.5	\$ 9,512.8
Liabilities:			
Other accrued liabilities	\$ 233.5	\$ 35.6	\$ 269.1
Long-term operating lease liabilities	—	185.5	185.5
Other long-term liabilities	119.8	(66.7)	53.1
Total liabilities	\$ 4,540.1	\$ 154.4	\$ 4,694.5
Stockholders' equity:			
Accumulated deficit	\$ (2,831.4)	\$ (4.9)	\$ (2,836.3)

The adoption of the standard had no impact on the Company's Condensed Consolidated Statements of Operations and Condensed Consolidated Statements of Cash Flows or debt-covenant compliance under its current agreements. See Note 15, *Commitment and Contingencies*, for additional disclosures required upon adopting the standard.

Leases

The Company determines if an arrangement is a lease at inception. The Company evaluates classification of leases at commencement and, as necessary, at modification. As of June 30, 2019, the Company did not have any finance leases. Operating leases are included in operating lease ROU assets, other accrued liabilities, and operating lease liabilities on the Company's Condensed Consolidated Balance Sheets. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease.

Operating lease ROU assets and liabilities are recognized on the commencement date based on the present value of lease payments over the lease term. The operating lease ROU asset also includes any lease payments made prior to lease commencement and excludes lease incentives. Variable lease payments not dependent on an index or a rate, are expensed as incurred and are not included within the ROU asset and lease liability calculation. Variable lease payments primarily include reimbursements of costs incurred by lessors for common area maintenance and utilities. The Company's lease terms are the noncancelable period including any rent-free periods provided by the lessor and include options to extend or terminate the lease when it is reasonably certain that it will exercise that option. At lease inception, and in subsequent periods as necessary, the Company estimates the lease term based on its assessment of extension and termination options that are reasonably certain to be exercised. Lease costs are recognized on a straight-line basis over the lease term.

The Company does not separate non-lease components from lease components for all underlying classes of assets. In addition, the Company does not recognize ROU assets and lease liabilities for short-term leases, which have a lease term of twelve months or less and do not include an option to purchase the underlying asset that the Company is reasonably certain to exercise. Lease cost for short-term leases is recognized on a straight-line basis over the lease term.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Recent Accounting Standards Not Yet Adopted

Fair Value Measurement: In August 2018, the FASB issued ASU No. 2018-13 (Topic 820) *Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement*, which eliminates, adds, and modifies certain disclosure requirements for fair value measurements under ASC 820. This ASU is to be applied on a prospective basis for certain modified or new disclosure requirements, and all other amendments in the standard are to be applied on a retrospective basis. The new standard is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. The Company is currently evaluating the impact of adoption on the Consolidated Financial Statements.

Simplifying the Test for Goodwill Impairment: In January 2017, the FASB issued ASU No. 2017-04 (Topic 350) *Intangibles—Goodwill and Other: Simplifying the Test for Goodwill Impairment*, which removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. Under the amended guidance, a goodwill impairment charge will now be recognized for the amount by which the carrying value of a reporting unit exceeds its fair value, not to exceed the carrying amount of goodwill. This ASU will be applied on a prospective basis and is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted for any impairment tests performed after January 1, 2017. The Company does not expect the adoption to have a material impact on the Consolidated Financial Statements.

Credit Losses on Financial Instruments: In June 2016, the FASB issued ASU No. 2016-13 (Topic 326) *Financial Instruments—Credit Losses: Measurement of Credit Losses on Financial Instruments*, which provides more decision-useful information about the expected credit losses on financial instruments and changes the loss impairment methodology. An amendment issued by the FASB in November 2018 clarifies that receivables arising from operating leases are not within the scope of Topic 326 and should be accounted for in accordance with Topic 842. This pronouncement and its amendments are effective for reporting periods beginning after December 15, 2019, and interim periods within those fiscal years, using a modified retrospective adoption method. Early adoption is permitted. The Company is currently evaluating the impact of adoption on the Consolidated Financial Statements.

Juniper Networks, Inc.**Notes to Condensed Consolidated Financial Statements (Continued)**
(Unaudited)**Note 3. Business Combinations**

On April 1, 2019, the Company acquired 100% ownership of Mist Systems, Inc. ("Mist") for \$359.2 million. The purchase consideration consisted of cash of \$354.5 million and \$4.7 million in share-based awards attributable to services prior to the acquisition. The acquisition of Mist, a company that provides cloud-managed wireless networks powered by artificial intelligence, is expected to enhance Juniper's enterprise networking portfolio by combining Mist's next-generation Wireless LAN platform with Juniper's wired LAN, SD-WAN, and security solutions to deliver integrated end-to-end user and IT experiences.

The following table summarizes the estimated fair value of the assets acquired and liabilities assumed at the acquisition date (in millions):

	Amount
Cash and cash equivalents	\$ 38.9
Goodwill	228.9
Intangible assets	102.0
Other assets acquired	15.8
Liabilities assumed	(26.4)
Total	<u>\$ 359.2</u>

The goodwill recognized in connection with the acquisition is primarily attributable to anticipated synergies from future growth and will not be deductible for income tax purposes.

The following table summarizes the fair value of the separately identifiable intangible assets at the time of acquisition (in millions):

	Amount
Intangible assets (*):	
Developed technology	\$ 81.0
Customer relationships	15.0
Trade name	6.0
Total intangible assets acquired	<u>\$ 102.0</u>

(*) Estimated useful life of each of the assets is 5 years.

Acquisition-related costs were not material during the three and six months ended June 30, 2019 and were expensed in the period incurred within general and administrative expense in the Company's Condensed Consolidated Statements of Operations.

The Company's Condensed Consolidated Financial Statements include the operating results of this business combination from the date of acquisition. Pro forma results of operations for this acquisition have not been presented, as the financial impact to the Company's consolidated results of operations is not material. The primary areas of the preliminary purchase price allocation that are subject to change relate to certain legal and income tax matters.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 4. Cash Equivalents and Investments

Investments in Available-for-Sale Debt Securities

The following table summarizes the Company's unrealized gains and losses and fair value of investments designated as available-for-sale debt securities as of June 30, 2019 and December 31, 2018 (in millions):

	As of June 30, 2019				As of December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Fixed income securities:								
Asset-backed securities	\$ 44.0	\$ —	\$ —	\$ 44.0	\$ 46.8	\$ —	\$ (0.3)	\$ 46.5
Certificates of deposit	51.8	—	—	51.8	152.9	—	—	152.9
Commercial paper	517.2	—	—	517.2	393.6	—	—	393.6
Corporate debt securities	518.3	0.4	(0.3)	518.4	416.1	—	(3.1)	413.0
Foreign government debt securities	26.8	—	—	26.8	20.0	—	(0.1)	19.9
Time deposits	111.2	—	—	111.2	278.6	—	—	278.6
U.S. government agency securities	41.4	—	—	41.4	87.2	—	(0.2)	87.0
U.S. government securities	602.5	0.4	(0.1)	602.8	811.8	—	(0.5)	811.3
Total fixed income securities	1,913.2	0.8	(0.4)	1,913.6	2,207.0	—	(4.2)	2,202.8
Privately-held debt and redeemable preferred stock securities	12.6	37.4	—	50.0	16.6	37.4	—	54.0
Total available-for-sale debt securities	\$ 1,925.8	\$ 38.2	\$ (0.4)	\$ 1,963.6	\$ 2,223.6	\$ 37.4	\$ (4.2)	\$ 2,256.8
Reported as:								
Cash equivalents	\$ 421.6	\$ —	\$ (0.1)	\$ 421.5	\$ 936.5	\$ —	\$ —	\$ 936.5
Short-term investments	1,416.8	0.8	(0.3)	1,417.3	1,069.2	—	(1.9)	1,067.3
Long-term investments	74.8	—	—	74.8	201.3	—	(2.3)	199.0
Other long-term assets	12.6	37.4	—	50.0	16.6	37.4	—	54.0
Total	\$ 1,925.8	\$ 38.2	\$ (0.4)	\$ 1,963.6	\$ 2,223.6	\$ 37.4	\$ (4.2)	\$ 2,256.8

The following table presents the contractual maturities of the Company's total fixed income securities as of June 30, 2019 (in millions):

	Amortized Cost	Estimated Fair Value
Due in less than one year	\$ 1,838.4	\$ 1,838.8
Due between one and five years	74.8	74.8
Total	\$ 1,913.2	\$ 1,913.6

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

The following tables present the Company's total fixed income securities that were in an unrealized loss position as of June 30, 2019 and December 31, 2018 (in millions):

	As of June 30, 2019					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Fixed income securities:						
Asset-backed securities	\$ 1.2	\$ —	\$ 17.4	\$ —	\$ 18.6	\$ —
Certificates of deposit	4.9	—	—	—	4.9	—
Corporate debt securities	26.7	—	207.6	(0.3)	234.3	(0.3)
Foreign government debt securities	—	—	10.9	—	10.9	—
U.S. government agency securities	13.0	—	17.1	(0.1)	30.1	(0.1)
U.S. government securities	—	—	28.9	—	28.9	—
Total fixed income securities	\$ 45.8	\$ —	\$ 281.9	\$ (0.4)	\$ 327.7	\$ (0.4)

	As of December 31, 2018					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Fixed income securities:						
Asset-backed securities	\$ 3.1	\$ —	\$ 43.0	\$ (0.3)	\$ 46.1	\$ (0.3)
Corporate debt securities	72.6	(0.1)	330.7	(3.0)	403.3	(3.1)
Foreign government debt securities	1.5	—	18.4	(0.1)	19.9	(0.1)
U.S. government agency securities	2.0	—	45.2	(0.2)	47.2	(0.2)
U.S. government securities	344.0	—	63.5	(0.5)	407.5	(0.5)
Total fixed income securities	\$ 423.2	\$ (0.1)	\$ 500.8	\$ (4.1)	\$ 924.0	\$ (4.2)

For available-for-sale debt securities that have unrealized losses, the Company assesses impairment by evaluating various factors, including whether (i) it has the intention to sell any of these investments and (ii) whether it is more likely than not that it will be required to sell any of these investments before recovery of the entire amortized cost basis. As of June 30, 2019, the Company had 271 investments in unrealized loss positions. The gross unrealized losses related to these investments were primarily due to changes in market interest rates. The Company anticipates that it will recover the entire amortized cost basis of such available-for-sale debt securities and has determined that no other-than-temporary impairments associated with credit losses were required to be recognized during the three and six months ended June 30, 2019 and June 30, 2018.

During the three and six months ended June 30, 2019 and June 30, 2018, there were no material gross realized gains or losses from available-for-sale debt securities.

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Investments in Equity Securities

The following table presents the Company's investments in equity securities as of June 30, 2019 and December 31, 2018 (in millions):

	As of	
	June 30, 2019	December 31, 2018
Equity investments with readily determinable fair value		
Money market funds ⁽¹⁾	\$ 475.3	\$ 996.9
Mutual funds ⁽²⁾	26.5	24.3
Publicly-traded equity securities	1.6	2.8
Equity investments without readily determinable fair value	43.4	36.4
Total equity securities	<u>\$ 546.8</u>	<u>\$ 1,060.4</u>
Reported as:		
Cash equivalents	\$ 471.0	\$ 985.3
Short-term investments	1.6	2.8
Prepaid expenses and other current assets	4.7	10.9
Other long-term assets	69.5	61.4
Total	<u>\$ 546.8</u>	<u>\$ 1,060.4</u>

- ⁽¹⁾ Balance includes \$4.3 million and \$11.6 million in restricted investments measured at fair value, related to the Company's acquisition-related escrow accounts as of June 30, 2019 and December 31, 2018, respectively.
- ⁽²⁾ Balance relates to restricted investments measured at fair value related to the Company's Deferred Compensation Plan.

For the three and six months ended June 30, 2019 and June 30, 2018, there were no material unrealized gains or losses recognized for equity investments.

Restricted Cash and Investments

As of June 30, 2019, the carrying value of restricted cash and investments was \$92.9 million, of which \$22.7 million was included in prepaid expenses and other current assets and \$70.2 million was included in other long-term assets on the Condensed Consolidated Balance Sheet.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash included in the Condensed Consolidated Balance Sheets as of June 30, 2019 and December 31, 2018 (in millions):

	As of	
	June 30, 2019	December 31, 2018
Cash and cash equivalents	\$ 1,381.3	\$ 2,489.0
Restricted cash included in Prepaid expenses and other current assets	18.0	16.8
Restricted cash included in Other long-term assets	44.1	—
Total cash, cash equivalents, and restricted cash	<u>\$ 1,443.4</u>	<u>\$ 2,505.8</u>

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 5. Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following table provides a summary of assets and liabilities measured at fair value on a recurring basis and as reported in the Condensed Consolidated Balance Sheets (in millions):

	Fair Value Measurements at June 30, 2019				Fair Value Measurements at December 31, 2018			
	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total
Assets:								
Available-for-sale debt securities:								
Asset-backed securities	\$ —	\$ 44.0	\$ —	\$ 44.0	\$ —	\$ 46.5	\$ —	\$ 46.5
Certificates of deposit	—	51.8	—	51.8	—	152.9	—	152.9
Commercial paper	—	517.2	—	517.2	—	393.6	—	393.6
Corporate debt securities	—	518.4	—	518.4	—	413.0	—	413.0
Foreign government debt securities	—	26.8	—	26.8	—	19.9	—	19.9
Time deposits	—	111.2	—	111.2	—	278.6	—	278.6
U.S. government agency securities	—	41.4	—	41.4	—	87.0	—	87.0
U.S. government securities	351.7	251.1	—	602.8	352.8	458.5	—	811.3
Privately-held debt and redeemable preferred stock securities	—	—	50.0	50.0	—	—	54.0	54.0
Total available-for-sale debt securities	351.7	1,561.9	50.0	1,963.6	352.8	1,850.0	54.0	2,256.8
Equity securities:								
Money market funds	475.3	—	—	475.3	996.9	—	—	996.9
Mutual funds	26.5	—	—	26.5	24.3	—	—	24.3
Publicly-traded equity securities	1.6	—	—	1.6	2.8	—	—	2.8
Total equity securities	503.4	—	—	503.4	1,024.0	—	—	1,024.0
Derivative assets:								
Foreign exchange contracts	—	5.5	—	5.5	—	5.3	—	5.3
Total assets measured at fair value	\$ 855.1	\$ 1,567.4	\$ 50.0	\$ 2,472.5	\$ 1,376.8	\$ 1,855.3	\$ 54.0	\$ 3,286.1
Liabilities:								
Derivative liabilities:								
Foreign exchange contracts	\$ —	\$ (5.0)	\$ —	\$ (5.0)	\$ —	\$ (7.1)	\$ —	\$ (7.1)
Total liabilities measured at fair value	\$ —	\$ (5.0)	\$ —	\$ (5.0)	\$ —	\$ (7.1)	\$ —	\$ (7.1)
Total assets, reported as:								
Cash equivalents	\$ 471.0	\$ 421.5	\$ —	\$ 892.5	\$ 1,025.2	\$ 896.6	\$ —	\$ 1,921.8
Short-term investments	349.7	1,069.2	—	1,418.9	297.5	772.6	—	1,070.1
Long-term investments	3.6	71.2	—	74.8	18.2	180.8	—	199.0
Prepaid expenses and other current assets	4.7	5.5	—	10.2	10.8	5.3	—	16.1
Other long-term assets	26.1	—	50.0	76.1	25.1	—	54.0	79.1
Total assets measured at fair value	\$ 855.1	\$ 1,567.4	\$ 50.0	\$ 2,472.5	\$ 1,376.8	\$ 1,855.3	\$ 54.0	\$ 3,286.1
Total liabilities, reported as:								
Other accrued liabilities	\$ —	\$ (5.0)	\$ —	\$ (5.0)	\$ —	\$ (7.1)	\$ —	\$ (7.1)
Total liabilities measured at fair value	\$ —	\$ (5.0)	\$ —	\$ (5.0)	\$ —	\$ (7.1)	\$ —	\$ (7.1)

Juniper Networks, Inc.**Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)**

The Company's Level 2 available-for-sale debt securities are priced using quoted market prices for similar instruments or non-binding market prices that are corroborated by observable market data. The Company uses inputs such as actual trade data, benchmark yields, broker/dealer quotes, or alternative pricing sources with reasonable levels of price transparency which are obtained from quoted market prices, independent pricing vendors, or other sources, to determine the ultimate fair value of these assets. The Company's derivative instruments are classified as Level 2, as they are not actively traded and are valued using pricing models that use observable market inputs. The Company's policy is to recognize asset or liability transfers among Level 1, Level 2, and Level 3 at the beginning of the quarter in which a change in circumstances resulted in a transfer. During the three and six months ended June 30, 2019, the Company had no transfers between levels of the fair value hierarchy of its assets or liabilities measured at fair value.

All of the Company's privately-held debt and redeemable preferred stock securities are classified as Level 3 assets due to the lack of observable inputs to determine fair value. The Company estimates the fair value of its privately-held debt and redeemable preferred stock securities on a recurring basis using an analysis of the financial condition and near-term prospects of the investee, including recent financing activities and the investee's capital structure. During the three and six months ended June 30, 2019, there were no significant activities related to privately-held debt and redeemable preferred stock securities.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Certain of the Company's assets, including intangible assets and goodwill, are measured at fair value on a nonrecurring basis, when they are deemed to be other-than-temporarily impaired. There were no impairment charges recognized during the three and six months ended June 30, 2019.

Equity investments without readily determinable fair value are measured at fair value, when they are deemed to be impaired or when there is an adjustment from observable price changes. For the three and six months ended June 30, 2019, there were no material impairment charges or adjustments resulting from observable price changes for equity investments without readily determinable fair value.

As of June 30, 2019 and December 31, 2018, the Company had no liabilities required to be measured at fair value on a nonrecurring basis.

Assets and Liabilities Not Measured at Fair Value

The carrying amounts of the Company's accounts receivable, accounts payable, and other accrued liabilities approximate fair value due to their short maturities. As of June 30, 2019 and December 31, 2018, the estimated fair value of the Company's total outstanding debt in the Condensed Consolidated Balance Sheets was \$1,897.4 million and \$2,158.7 million, respectively, based on observable market inputs (Level 2). The carrying value of the promissory note issued to the Company in connection with the previously completed sale of Junos Pulse, along with the accumulated interest paid in kind, of \$73.7 million and \$69.0 million approximates its fair value as of June 30, 2019 and December 31, 2018, respectively. Notes receivable are generally classified as Level 3 asset due to the lack of observable inputs to determine fair value. The carrying value of a contract manufacturer deposit of \$65.8 million, reported within other long-term assets, in the Condensed Consolidated Balance Sheets approximates its fair value as of June 30, 2019. See Note 7, *Other Financial Information*, for further information on the contract manufacturer deposit.

Juniper Networks, Inc.**Notes to Condensed Consolidated Financial Statements (Continued)**
(Unaudited)**Note 6. Derivative Instruments**

The Company uses derivatives to partially offset its market exposure to fluctuations in certain foreign currencies and does not enter into derivatives for speculative or trading purposes.

The notional amount of the Company's foreign currency derivatives is summarized as follows (in millions):

	As of	
	June 30, 2019	December 31, 2018
Cash flow hedges	\$ 381.8	\$ 497.7
Non-designated derivatives	194.6	158.7
Total	\$ 576.4	\$ 656.4

Cash Flow Hedges

The Company uses foreign currency forward contracts to hedge the Company's planned cost of revenues and operating expenses denominated in foreign currencies. These derivatives are designated as cash flow hedges. Execution of cash flow hedge derivatives typically occurs every month with maturities of eighteen months or less. As of June 30, 2019, an estimated \$0.4 million of unrealized net gain within accumulated other comprehensive loss is expected to be reclassified into earnings within the next 12 months.

The Company recognized an unrealized loss of \$2.1 million and unrealized gain of \$1.3 million in accumulated other comprehensive income for the effective portion of its derivative instruments for the three and six months ended June 30, 2019, respectively; and an unrealized loss of \$15.9 million and \$2.5 million for the comparable periods in fiscal 2018, respectively. The Company reclassified a gain of \$0.3 million and a loss of \$0.7 million out of accumulated other comprehensive income to cost of revenues and operating expenses in the Condensed Consolidated Statements of Operations during the three and six months ended June 30, 2019, respectively, and a gain of \$3.3 million and \$8.9 million for the comparable periods in fiscal 2018, respectively.

See Note 5, *Fair Value Measurements*, for the fair values of the Company's derivative instruments in the Condensed Consolidated Balance Sheets.

Non-Designated Derivatives

The Company also uses foreign currency forward contracts to mitigate variability in gains and losses generated from the remeasurement of certain monetary assets and liabilities denominated in foreign currencies. These foreign exchange forward contracts typically have maturities of approximately one to three months. The outstanding non-designated derivative instruments are carried at fair value. Changes in the fair value of these derivatives recorded in other expense, net within the Condensed Consolidated Statements of Operations were not material during the three and six months ended June 30, 2019 and June 30, 2018.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 7. Other Financial Information

Inventory

Total inventory consisted of the following (in millions):

	As of	
	June 30, 2019	December 31, 2018
Production and service materials	\$ 72.2	\$ 60.6
Finished goods	22.1	21.4
Inventory	<u>\$ 94.3</u>	<u>\$ 82.0</u>
Reported as:		
Prepaid expenses and other current assets	\$ 92.1	\$ 80.6
Other long-term assets	2.2	1.4
Total	<u>\$ 94.3</u>	<u>\$ 82.0</u>

Deposit

The Company has a non-interest bearing deposit balance of \$65.8 million, net of an unamortized discount balance of \$4.2 million, to a contract manufacturer per the terms of the agreement. The discount is calculated based on an imputed interest rate of 5.0% at June 30, 2019. The imputed interest will be amortized over the term of the deposit to interest income along with a corresponding charge to cost of revenues. The deposit is due in the third quarter of 2020 and has been classified as other long-term assets on the Condensed Consolidated Balance Sheets.

Warranties

Changes during the six months ended June 30, 2019 in the Company's warranty reserve as reported within other accrued liabilities in the Condensed Consolidated Balance Sheets were as follows (in millions):

Balance as of December 31, 2018	\$ 28.0
Provisions made during the period	16.2
Actual costs incurred during the period	(15.6)
Balance as of June 30, 2019	<u>\$ 28.6</u>

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Deferred Revenue

Details of the Company's deferred revenue, as reported in the Condensed Consolidated Balance Sheets, were as follows (in millions):

	As of	
	June 30, 2019	December 31, 2018
Deferred product revenue:		
Undelivered product commitments and other product deferrals	\$ 142.0	\$ 163.3
Deferred gross product revenue	142.0	163.3
Deferred cost of product revenue	(8.6)	(18.9)
Deferred product revenue, net	133.4	144.4
Deferred service revenue	1,068.0	1,069.2
Total	\$ 1,201.4	\$ 1,213.6
Reported as:		
Current	\$ 820.0	\$ 829.3
Long-term	381.4	384.3
Total	\$ 1,201.4	\$ 1,213.6

Revenue

See Note 12, *Segments*, for disaggregated revenue by product and service, customer vertical, and geographic region.

Product revenue of \$15.0 million and \$40.6 million included in deferred revenue at January 1, 2019 was recognized during the three and six months ended June 30, 2019, respectively. Service revenue of \$190.5 million and \$456.8 million included in deferred revenue at January 1, 2019 was recognized during the three and six months ended June 30, 2019, respectively.

The following table summarizes the transaction price for contracts that have not yet been recognized as revenue as of June 30, 2019 and when the Company expects to recognize the amounts as revenue (in millions):

	Revenue Recognition Expected by Period			
	Total	Less than 1 year	1-3 years	More than 3 years
Product	\$ 142.0	\$ 115.3	\$ 23.3	\$ 3.4
Service	1,068.0	713.3	297.0	57.7
Total	\$ 1,210.0	\$ 828.6	\$ 320.3	\$ 61.1

Deferred Commissions

Deferred commissions were \$23.4 million as of June 30, 2019. For the three and six months ended June 30, 2019, amortization expense for the deferred commissions was \$31.2 million and \$66.1 million, respectively. There were no impairment charges recognized during the three and six months ended June 30, 2019.

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Other Expense, Net

Other expense, net, consisted of the following (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Interest income	\$ 19.8	\$ 16.0	\$ 43.3	\$ 30.9
Interest expense	(22.0)	(25.9)	(46.2)	(51.9)
(Loss) gain on investments, net	(2.8)	0.6	(1.2)	0.1
Other	0.4	0.4	1.3	(2.1)
Other expense, net	<u>\$ (4.6)</u>	<u>\$ (8.9)</u>	<u>\$ (2.8)</u>	<u>\$ (23.0)</u>

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 8. Restructuring Charges

During the first quarter of 2019, the Company initiated a restructuring plan (the "2019 Restructuring Plan") designed to realign its workforce with the Company's sales strategy, improve productivity, and enhance cost efficiencies. During the second quarter of 2019, the Company amended the 2019 Restructuring Plan and undertook certain further actions that resulted in additional severance, additional facility consolidation, and contract termination costs.

During the three and six months ended June 30, 2019, the Company recorded \$7.0 million and \$22.1 million of severance costs related to workforce reductions, \$1.9 million and \$2.1 million of facility consolidations, and \$12.5 million of contract termination costs, respectively, to restructuring charges in the Condensed Consolidated Statements of Operations.

Restructuring liabilities are reported within other accrued liabilities in the Condensed Consolidated Balance Sheets. The following table provides a summary of changes in the restructuring liabilities for the Company's 2019 and prior year restructuring plans (in millions):

	December 31, 2018		Charges		Cash Payments		Other		June 30, 2019
Severance	\$ 1.1	\$	22.1	\$	(19.2)	\$	—	\$	4.0
Facility consolidations	—		2.1		(0.1)		(2.0)		—
Contract terminations	—		12.5		—		(0.2)		12.3
Total	\$ 1.1	\$	36.7	\$	(19.3)	\$	(2.2)	\$	16.3

The Company expects to pay the remaining restructuring liabilities by the end of the third quarter of 2019.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 9. Debt

Revolving Credit Facility

In April 2019, the Company entered into a new credit agreement with certain institutional lenders that provides for a five -year \$500.0 million unsecured revolving credit facility (the "Revolving Credit Facility"), with an option to increase the Revolving Credit Facility by up to an additional \$200.0 million , subject to the lenders' approval. Proceeds of loans made under the Revolving Credit Facility may be used by the Company for working capital and general corporate purposes. The Revolving Credit Facility will terminate in April 2024, subject to two one -year maturity extension options, on the terms and conditions as set forth in the credit agreement. As of June 30, 2019 , there were no amounts outstanding under the Revolving Credit Facility.

Borrowings under the Revolving Credit Facility will bear interest, at either (i) a floating rate per annum equal to the base rate plus a margin of between 0.00% and 0.375% , depending on the Company's public debt rating or ii) a per annum rate equal to the reserve adjusted Eurocurrency rate, plus a margin of between 0.910% and 1.375% , depending on the Company's public debt rating. Base rate is defined as the greatest of (A) Citibank's base rate, (B) the federal funds rate plus 0.500% or (C) the ICE Benchmark Administration Settlement Rate applicable to dollars for a period of one month plus 1.00% . The Eurocurrency rate is determined for U.S. dollars and Pounds Sterling as the rate at which deposits in such currency are offered in the London interbank market for the applicable interest period and for Euro as the rate specified for deposits in Euro with a maturity comparable to the applicable interest period.

The Revolving Credit Facility requires the Company to maintain a leverage ratio no greater than 3.0 x (provided that if a material acquisition has been consummated, the Company is permitted to maintain a leverage ratio no greater than 3.5 x for up to four quarters) and an interest coverage ratio no less than 3.0 x during the term of the credit facility. As of June 30, 2019 , the Company was in compliance with all covenants in the Credit Agreement.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 10. Equity

The following table summarizes dividends paid, stock repurchases and retirements under the Company's stock repurchase program (in millions, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Dividends				
Per share	\$ 0.19	\$ 0.18	\$ 0.38	\$ 0.36
Amount	\$ 65.5	\$ 62.8	\$ 131.7	\$ 124.9
Repurchased under the 2018 Stock Repurchase Program				
Shares	8.6	—	8.6	23.3
Average price per share	\$ 27.94	\$ —	\$ 27.94	\$ 25.80
Amount	\$ 300.0	\$ —	\$ 300.0	\$ 750.0

Cash Dividends on Shares of Common Stock

During the three and six months ended June 30, 2019, the Company declared a quarterly cash dividend of \$0.19 per share of common stock on January 29, 2019 and April 25, 2019, respectively, which was paid on March 22, 2019 and June 24, 2019, respectively, to stockholders of record on March 1, 2019 and June 3, 2019, respectively. Any future dividends, and the establishment of record and payment dates, are subject to approval by the Board of Directors (the "Board") of Juniper or an authorized committee thereof. See Note 16, *Subsequent Event*, for discussion of the Company's dividend declaration subsequent to June 30, 2019.

Stock Repurchase Activities

In January 2018, the Board approved a \$2.0 billion share repurchase program ("2018 Stock Repurchase Program"). As part of the 2018 Stock Repurchase Program, in February 2018, the Company entered into an ASR to repurchase \$750.0 million of its common stock. The Company made an up-front payment of \$750.0 million pursuant to the ASR to repurchase its common stock. The aggregate number of shares ultimately repurchased of 29.3 million shares of common stock was determined based on a volume weighted average repurchase price, less an agreed upon discount, of \$25.62 per share.

On April 29, 2019, the Company entered into an ASR, to repurchase an aggregate of approximately \$300.0 million of the Company's outstanding common stock. Under the ASR, the Company made an up-front payment of \$300.0 million pursuant to the ASR and received and retired an initial 8.6 million shares of the Company's common stock for an aggregate price of \$240.0 million, based on the market price of \$27.94 per share of the Company's common stock on the date of the transaction. The initial shares received by the Company were retired, accounted for as a reduction to stockholder's equity in the Condensed Consolidated Balance Sheets, and treated as a repurchase of common stock for purposes of calculating earnings per share. The forward contract for the remaining \$60.0 million is considered indexed to the Company's common stock and met all of the applicable criteria for equity classification.

The total number of shares of the Company's common stock to be ultimately received under the ASR will be calculated using the average daily volume weighted average price of the Company's stock during the repurchase period, less a discount and subject to adjustments pursuant to the terms and conditions of the ASR. Final settlement of the transactions under the ASR is expected to be completed no sooner than July 1, 2019 and no later than September 26, 2019.

As of June 30, 2019, there was approximately \$1.0 billion of authorized funds remaining under the 2018 Stock Repurchase Program.

Future share repurchases under the 2018 Stock Repurchase Program will be subject to a review of the circumstances at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements. The Company's 2018 Stock Repurchase Program may be discontinued at any time.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

In addition to repurchases under the 2018 Stock Repurchase Program, the Company also repurchases common stock from certain employees in connection with the net issuance of shares to satisfy applicable tax withholding requirements upon the vesting of certain stock awards issued to such employees. Repurchases associated with tax withholdings were not material during the three and six months ended June 30, 2019 and June 30, 2018 .

Accumulated Other Comprehensive Loss, Net of Tax

The components of accumulated other comprehensive loss, net of related taxes, for the six months ended June 30, 2019 were as follows (in millions):

	Unrealized Gains/Losses on Available-for- Sale Debt Securities	Unrealized Gains/Losses on Cash Flow Hedges	Foreign Currency Translation Adjustments	Total
Balance as of December 31, 2018	\$ 25.5	\$ (0.9)	\$ (42.8)	\$ (18.2)
Other comprehensive income before reclassifications	3.8	0.3	1.3	5.4
Amount reclassified from accumulated other comprehensive loss	—	1.5	—	1.5
Other comprehensive income, net	3.8	1.8	1.3	6.9
Balance as of June 30, 2019	\$ 29.3	\$ 0.9	\$ (41.5)	\$ (11.3)

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 11. Employee Benefit Plans

Equity Incentive Plans

The Company has stock-based compensation plans pursuant to which it has granted stock options, restricted stock units ("RSUs"), and performance share awards ("PSAs"). The Company also maintains its 2008 Employee Stock Purchase Plan (the "ESPP") for all eligible employees. As of June 30, 2019, 15.9 million and 7.4 million shares were available for future issuance under the Company's 2015 Equity Incentive Plan (the "2015 Plan") and the ESPP, respectively. In connection with past acquisitions, the Company also assumed or substituted stock options, RSUs, restricted stock unit awards ("RSAs"), and PSAs.

On April 1, 2019, the Company completed the acquisition of Mist. In connection with the acquisition, the Company assumed stock options, RSUs and RSAs, including those that had been granted under the Mist Systems, Inc. 2014 Equity Incentive Plan (the "Mist Plan"), and converted the awards into Juniper Networks' stock options, RSUs and RSAs, respectively, based on an exchange ratio set forth in the acquisition agreement between Juniper Networks and Mist. The Company assumed an aggregate of 1.9 million shares of stock options, RSUs and RSAs in connection with the acquisition of Mist. No additional awards can be granted under the Mist Plan.

Stock Option Activities

The following table summarizes the Company's stock option activity and related information as of and for the six months ended June 30, 2019 (in millions, except for per share amounts and years):

	Outstanding Options			
	Number of Shares	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (In Years)	Aggregate Intrinsic Value
Balance as of December 31, 2018	0.1	\$ 20.66		
Assumed upon the acquisition of Mist	1.1	5.05		
Exercised	(0.1)	20.32		
Expired/Canceled	(0.1)	6.55		
Balance as of June 30, 2019	1.0	\$ 4.95	8.5	\$ 22.5
As of June 30, 2019:				
Vested and expected-to-vest options	1.0	\$ 4.95	8.5	\$ 22.5
Exercisable options	0.1	\$ 4.24	8.0	\$ 2.3

Restricted Stock Unit and Performance Share Award Activities

The Company's RSU and PSA activity and related information as of and for the six months ended June 30, 2019 were as follows (in millions, except per share amounts and years):

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

	Outstanding RSUs, RSAs and PSAs ⁽⁴⁾			
	Number of Shares	Weighted Average Grant-Date Fair Value per Share	Weighted Average Remaining Contractual Term (In Years)	Aggregate Intrinsic Value
Balance as of December 31, 2018	17.4	\$ 25.32		
RSUs granted ⁽¹⁾⁽³⁾	6.7	25.51		
RSUs assumed upon the acquisition of Mist	0.1	25.81		
RSAs assumed upon the acquisition of Mist	0.7	27.20		
PSAs granted ⁽²⁾⁽³⁾	1.4	25.18		
RSUs vested	(4.2)	25.89		
RSAs vested	(0.1)	23.11		
PSAs vested	(0.5)	26.77		
RSUs canceled	(1.5)	26.12		
PSAs canceled	(0.7)	23.61		
Balance as of June 30, 2019	19.3	\$ 25.29	1.3	\$ 514.2

- ⁽¹⁾ Includes service-based and market-based RSUs. The number of shares subject to market-based condition represents the aggregate maximum number of shares that may be issued pursuant to the award over its full term. The aggregate number of shares subject to market-based condition that would be issued if market criteria determined by the Compensation Committee of the Board are achieved at target is 0.2 million shares. Depending on achievement of such performance goals, the range of shares that could be issued under these awards is zero to 0.4 million shares.
- ⁽²⁾ The number of shares subject to PSAs granted represents the aggregate maximum number of shares that may be issued pursuant to the award over its full term. The aggregate number of shares subject to these PSAs that would be issued if performance goals determined by the Compensation Committee of the Board are achieved at target is 0.4 million shares. Depending on achievement of such performance goals, the range of shares that could be issued under these awards is zero to 0.7 million shares.
- ⁽³⁾ The grant date fair value of RSUs and PSAs were reduced by the present value of dividends expected to be paid on the underlying shares of common stock during the requisite and derived service period as these awards are not entitled to receive dividends until vested. During the six months ended June 30, 2019, the Company declared a quarterly cash dividend of \$0.19 per share of common stock on January 29, 2019 and April 25, 2019.
- ⁽⁴⁾ 0.3 million shares of PSAs were modified during the six months ended June 30, 2019, which relate to PSAs granted in 2018 and PSAs assumed by the Company in connection with acquisitions consummated in 2016. Compensation cost resulting from the modifications totaled \$7.3 million to be recognized over the remaining terms of the modified awards.

Employee Stock Purchase Plan

On November 6, 2017, the Company's Compensation Committee amended and restated the ESPP to provide that the offering period that began on February 1, 2018 would be for 24 months with four 6-month purchase periods. A new 24-month offering period will commence every six months thereafter. The purchase price for the Company's common stock under the ESPP is 85% of the lower of the fair market value of the shares at (1) the beginning of the applicable offering period or (2) the end of each 6-month purchase period during such offering period. The ESPP will continue in effect until February 25, 2028, unless terminated earlier under the provisions of the ESPP.

For the six months ended June 30, 2019 and June 30, 2018, shares issued under the ESPP were approximately 1.2 million and 1.3 million shares of common stock through the ESPP at an average exercise price of \$22.04 and \$22.23 per share, respectively. There were no stock purchases under the ESPP during the three months ended June 30, 2019 and June 30, 2018.

Share-Based Compensation Expense

Share-based compensation expense associated with stock options, RSUs, RSAs, PSAs, and the ESPP was recorded in the following cost and expense categories in the Condensed Consolidated Statements of Operations (in millions):

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Cost of revenues - Product	\$ 1.6	\$ 1.7	\$ 3.5	\$ 3.6
Cost of revenues - Service	4.4	4.9	8.9	9.7
Research and development	26.2	29.6	38.4	73.7
Sales and marketing	15.1	14.0	24.5	27.5
General and administrative	8.4	6.4	14.3	12.5
Total	<u>\$ 55.7</u>	<u>\$ 56.6</u>	<u>\$ 89.6</u>	<u>\$ 127.0</u>

The following table summarizes share-based compensation expense by award type (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Stock options	\$ 3.2	\$ 0.1	\$ 3.3	\$ 0.2
RSUs, RSAs, and PSAs	47.7	52.0	76.8	117.6
ESPP	4.8	4.5	9.5	9.2
Total	<u>\$ 55.7</u>	<u>\$ 56.6</u>	<u>\$ 89.6</u>	<u>\$ 127.0</u>

As of June 30, 2019 , the total unrecognized compensation cost related to unvested share-based awards was \$362.7 million to be recognized over a weighted-average period of 1.8 years.

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 12. Segments

The Company operates in one reportable segment. The Company's chief executive officer, who is the chief operating decision maker, reviews financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance, accompanied by disaggregated information about net revenues by product and service, customer vertical, and geographic region as presented below.

The following table presents net revenues by product and service (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Routing	\$ 416.9	\$ 490.6	\$ 791.6	\$ 898.7
Switching	215.6	254.8	392.0	484.8
Security	81.4	79.5	149.0	152.2
Total product	713.9	824.9	1,332.6	1,535.7
Total service	388.6	379.2	771.6	751.0
Total	\$ 1,102.5	\$ 1,204.1	\$ 2,104.2	\$ 2,286.7

The following table presents net revenues by customer vertical (*) (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Cloud	\$ 285.0	\$ 284.4	\$ 508.2	\$ 555.3
Service Provider	447.2	524.9	882.8	1,005.0
Enterprise	370.3	394.8	713.2	726.4
Total	\$ 1,102.5	\$ 1,204.1	\$ 2,104.2	\$ 2,286.7

(*) Certain insignificant prior-period amounts have been reclassified to conform to the current-period presentation.

The Company attributes revenues to geographic region based on the customer's shipping address. The following table presents net revenues by geographic region (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Americas:				
United States	\$ 601.2	\$ 624.8	\$ 1,077.8	\$ 1,157.1
Other	47.6	50.9	114.6	106.2
Total Americas	648.8	675.7	1,192.4	1,263.3
Europe, Middle East, and Africa	291.9	308.9	578.1	616.9
Asia Pacific	161.8	219.5	333.7	406.5
Total	\$ 1,102.5	\$ 1,204.1	\$ 2,104.2	\$ 2,286.7

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 13. Income Taxes

The following table provides details of income taxes (in millions, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Income before income taxes	\$ 77.8	\$ 150.9	\$ 122.3	\$ 192.3
Income tax provision	\$ 31.6	\$ 34.4	\$ 45.0	\$ 41.4
<i>Effective tax rate</i>	<i>40.6%</i>	<i>22.8%</i>	<i>36.8%</i>	<i>21.5%</i>

The Company's effective tax rate differs from the statutory rate of 21% , primarily due to the tax impact of state taxes, geographic mix of earnings including foreign-derived intangible income deductions and global intangible low-taxed income, R&D tax credits, tax audit settlements, nondeductible compensation, international realignments, and transfer pricing adjustments.

The Company's effective tax rate during the three and six months ended June 30, 2019 , reflects the impact of an international realignment and a related write-down of certain deferred tax assets, and the inability to fully benefit certain discrete charges recorded in the prior quarter.

As of June 30, 2019 , the total amount of gross unrecognized tax benefits was \$181.3 million , of which \$178.0 million , if recognized, would affect the effective tax rate.

The Company engages in continuous discussions and negotiations with tax authorities regarding tax matters in various jurisdictions. It is reasonably possible that the balance of unrecognized tax benefits could decrease by up to \$34.3 million within the next twelve months due to lapses of applicable statutes of limitations and the completion of tax review cycles in various tax jurisdictions.

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 14. Net Income per Share

The Company computed basic and diluted net income per share as follows (in millions, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Numerator:				
Net income	\$ 46.2	\$ 116.5	\$ 77.3	\$ 150.9
Denominator:				
Weighted-average shares used to compute basic net income per share	346.3	349.0	347.2	352.2
Dilutive effect of employee stock awards	2.8	2.3	4.5	4.6
Weighted-average shares used to compute diluted net income per share	349.1	351.3	351.7	356.8
Net income per share				
Basic	\$ 0.13	\$ 0.33	\$ 0.22	\$ 0.43
Diluted	\$ 0.13	\$ 0.33	\$ 0.22	\$ 0.42
Anti-dilutive shares	6.8	10.2	7.0	3.9

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 15. Commitments and Contingencies

Commitments

Except for the items below, there have been no material changes to the Company's commitments compared to the commitments described in Note 16, *Commitments and Contingencies*, in Notes to Consolidated Financial Statements in Item 8 of Part II of the Form 10-K.

Leases

The Company leases its facilities and certain equipment under non-cancelable operating leases that have remaining lease terms of 1 to 11 years and 1 to 5 years, respectively. Each leased facility is subject to an individual lease or sublease, which could provide various options to extend or terminate the lease agreement. Facilities are primarily comprised of corporate offices, data centers, and R&D facilities. Equipment includes vehicles and various office equipment. The Company also has variable lease payments that are primarily comprised of common area maintenance and utility charges. The Company's lease agreements do not contain any residual value guarantees or restrictive covenants.

The components of lease costs and other information related to leases were as follows (in millions, except years and percentages):

	Three Months Ended June 30, 2019	Six Months Ended June 30, 2019
Operating lease cost	\$ 14.0	\$ 25.9
Variable lease cost	2.7	5.8
Total lease cost	<u>\$ 16.7</u>	<u>\$ 31.7</u>
Operating cash outflows from operating leases	\$ 12.0	\$ 23.6
ROU assets obtained in exchange for new operating lease liabilities	\$ 0.7	\$ 1.3
Weighted average remaining lease term (years)	6.0	6.0
Weighted average discount rate	4.4%	4.4%

As of June 30, 2019, future minimum operating lease payments for each of the next five years and thereafter is as follows (in millions):

<u>Years Ending December 31,</u>	<u>Amount</u>
2019	\$ 21.6
2020	48.3
2021	41.2
2022	33.5
2023	30.4
Thereafter	60.2
Total lease payments	<u>235.2</u>
Less: interest	(27.9)
Total	<u>\$ 207.3</u>

Balance Sheet Information

Other accrued liabilities	39.8
Long-term operating lease liabilities	167.5
Total	<u>\$ 207.3</u>

Juniper Networks, Inc.

Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Purchase Commitments with Contract Manufacturers and Suppliers

In order to reduce manufacturing lead times and in the interest of having access to adequate component supply, the Company enters into agreements with contract manufacturers and certain suppliers to procure inventory based on the Company's requirements. A significant portion of the Company's purchase commitments arising from these agreements consists of firm and non-cancelable commitments. These purchase commitments totaled \$593.4 million as of June 30, 2019 .

The Company establishes a liability in connection with purchase commitments related to quantities in excess of its demand forecasts or obsolete materials charges for components purchased by the contract manufacturers based on the Company's demand forecast or customer orders. As of June 30, 2019 , the Company had accrued \$30.8 million based on its estimate of such charges.

Legal Proceedings

Investigations

The Company previously disclosed that it has been the subject of investigations by the U.S. Securities and Exchange Commission ("SEC") and the U.S. Department of Justice ("DOJ") into possible violations by the Company of the U.S. Foreign Corrupt Practices Act. In cooperation with these investigations, the Company and the Audit Committee of the Board of Directors, with the assistance of outside counsel and other independent advisors, conducted a thorough internal investigation. As a result of its internal investigation, the Company made significant improvements in its internal controls and carried out a number of disciplinary actions. In the fourth quarter of 2017, the DOJ notified the Company that the DOJ has closed its investigation related to these matters without taking any action against the Company. The Company is continuing to fully cooperate with the SEC's ongoing investigation, and based on the Company's recent communications with the Staff of the SEC, the Company believes that it is likely that the Staff of the SEC will seek to bring an enforcement action against the Company. The Company believes it is probable that it could incur a loss and has established an estimated legal reserve of \$12.0 million related to the ongoing SEC investigation; however, as discussions are continuing, there can be no assurance as to the timing or the terms of any final resolution of this matter.

Other Litigations and Investigations

In addition to the investigations discussed above, the Company is involved in other investigations, disputes, litigations, and legal proceedings. The Company records an accrual for loss contingencies for legal proceedings when it believes that an unfavorable outcome is both (a) probable and (b) the amount or range of any possible loss is reasonably estimable. The Company intends to aggressively defend itself in these matters, and while there can be no assurances and the outcome of these matters is currently not determinable, the Company currently believes that none of these existing claims or proceedings are likely to have a material adverse effect on its financial position. Notwithstanding the foregoing, there are many uncertainties associated with any litigation and these matters or other third-party claims against the Company may cause the Company to incur costly litigation and/or substantial settlement charges. In addition, the resolution of any intellectual property litigation may require the Company to make royalty payments, which could adversely affect gross margins in future periods. If any of those events were to occur, the Company's business, financial condition, results of operations, and cash flows could be adversely affected. The actual liability in any such matters may be materially different from the Company's estimates, if any, which could result in the need to adjust the liability and record additional expenses.

Juniper Networks, Inc.
Notes to Condensed Consolidated Financial Statements (Continued)
(Unaudited)

Note 16. Subsequent Event

Dividend Declaration

On July 25, 2019 , the Company announced that the Board declared a cash dividend of \$0.19 per share of common stock to be paid on September 25, 2019 to stockholders of record as of the close of business on September 4, 2019 .

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Quarterly Report on Form 10-Q, which we refer to as the Report, including "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements regarding future events and the future results of Juniper Networks, Inc., which we refer to as "we," "us," "Juniper," or the "Company," that are based on our current expectations, estimates, forecasts, and projections about our business, economic and market outlook, our results of operations, the industry in which we operate and the beliefs and assumptions of our management. Words such as "expects," "anticipates," "targets," "goals," "projects," "would," "will," "could," "may," "intends," "plans," "believes," "seeks," "estimates," variations of such words, and similar expressions are intended to identify such forward-looking statements. Forward-looking statements by their nature address matters that are, to different degrees, uncertain, and these forward-looking statements are only predictions and are subject to risks, uncertainties, and assumptions that are difficult to predict. Therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in this Report under the section entitled "Risk Factors" in Item 1A of Part II and elsewhere, and in other reports we file with the U.S. Securities and Exchange Commission, or the SEC. While forward-looking statements are based on reasonable expectations of our management at the time that they are made, you should not rely on them. We undertake no obligation to revise or update publicly any forward-looking statements for any reason, except as required by applicable law.

The following discussion is based upon our unaudited Condensed Consolidated Financial Statements included in Part 1, Item I, of this Report, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. In the course of operating our business, we routinely make decisions as to the timing of the payment of invoices, the collection of receivables, the manufacturing and shipment of products, the fulfillment of orders, the purchase of supplies, and the building of inventory and spare parts, among other matters. In making these decisions, we consider various factors, including contractual obligations, customer satisfaction, competition, internal and external financial targets and expectations, and financial planning objectives. Each of these decisions has some impact on the financial results for any given period.

To aid in understanding our operating results for the periods covered by this Report, we have provided an executive overview, which includes a summary of our business and market environment along with a financial results and key performance metrics overview. These sections should be read in conjunction with the more detailed discussion and analysis of our condensed consolidated financial condition and results of operations in this Item 2, our "Risk Factors" section included in Item 1A of Part II of this Report, and our unaudited Condensed Consolidated Financial Statements and Notes included in Item 1 of Part I of this Report, as well as our audited Consolidated Financial Statements and Notes included in Item 8 of Part II of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, or Form 10-K.

Business and Market Environment

Juniper designs, develops, and sells products and services for high-performance networks to enable customers to build scalable, reliable, secure and cost-effective networks for their businesses, while achieving agility and improved operating efficiency through automation.

Our products are sold in three geographic regions: Americas; Europe, Middle East and Africa, or EMEA; and Asia Pacific, or APAC. We sell our high-performance network products and service offerings across routing, switching, and security technologies. In addition to our products, we offer our customers services, including maintenance and support, professional services, and education and training programs. Our products and services address high-performance network requirements for our customers within our verticals: Cloud, Service Provider, and Enterprise who view their network as critical to their success. We believe our silicon, systems, and software represent innovations that transform the economics and experience of networking, helping our customers achieve superior performance, greater choice, and flexibility, while reducing overall total cost of ownership.

Further, our intent is to expand our software business by introducing new software solutions to our product portfolio that simplify the operation of networks, and allow our customers across our key verticals flexibility in consumption and deployment. We believe our software revenues as a percentage of total revenues will increase over time as we introduce new software product offerings and business models designed to better monetize the value of our software offerings.

We believe the network needs for our customers in our Cloud, Service Provider, and Enterprise verticals are converging, as these customers recognize the need for high performance networks and are adopting cloud architectures for their infrastructure and service delivery, such as large public and private data centers and service provider edge data centers, for improved agility and greater levels of operating efficiency.

We remain confident in our strategy and we are executing against our innovation roadmap, as each of our industry verticals transitions to cloud architectures. We believe our understanding of high-performance networking technology and cloud architecture and our strategy position us to capitalize on the industry transition to more automated, cost-efficient, scalable networks.

In the second quarter of 2019, we continued to execute on our product and solutions strategy and announced a cloud-managed version of our SD-WAN solution. Our Contrail Service Orchestration now gives enterprises a simple way to manage and secure the WAN infrastructure and Branch LAN and Wi-Fi networks. During the quarter we released our PTX10003 router that is 400-gig Ethernet, or 400G, ready, and our QFX5220 switch.

On April 1, 2019, we acquired Mist Systems, Inc., or Mist, a company that provides cloud-managed wireless networks powered by artificial intelligence. We believe that the acquisition of Mist will enhance our enterprise networking portfolio by combining Mist's next-generation Wireless local area network platform, or WLAN, with our wired LAN, software-defined wide area network solution, or SD-WAN, and security solutions to deliver integrated end-to-end user and information technology, or IT, experiences.

In the second quarter of 2019, we experienced weakness within our Service Provider vertical due to timing of deployments, but we believe our relationships remain strong. With the availability of our new MX 5G line cards, our Contrail Orchestration platform and our partnership with Ericsson, we believe we are well positioned to capitalize on our Service Provider customers' 5G and other Telco product initiatives. We expect Service Provider to be down in the year 2019 as compared to 2018.

In the second quarter of 2019, Enterprise decreased primarily due to timing of our customers' deployment cycle.

In the second quarter of 2019, we experienced improved trends within our Cloud vertical primarily due to an acceleration of certain wide area deployments, which had previously been proceeding at a slower rate. In the near-term, Cloud deployment cycles remain difficult to predict.

We are taking a number of actions that we believe will help Juniper achieve year-over-year revenue growth in the fourth quarter of 2019 such as: (1) introducing new product offerings which include new MX line cards to capitalize on 5G carrier initiatives, 400G platforms to capture data center footprint, and new enhancements to our Contrail Enterprise Multicloud platform that make it simpler and more cost effective; (2) transitioning our sales organization to better align with our sales strategy; and (3) monetizing our software offerings through subscriptions. Further, we believe the 400G upgrade cycle, 5G deployments, and enterprise multicloud initiatives each represent large opportunities where we are well positioned to benefit over the next several years.

Financial Results and Key Performance Metrics Overview

The following table provides an overview of our financial results and key financial metrics (in millions, except per share amounts, percentages, and days sales outstanding, or DSO):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	\$ Change	% Change	2019	2018	\$ Change	% Change
Net revenues	\$ 1,102.5	\$ 1,204.1	\$ (101.6)	(8)%	\$ 2,104.2	\$ 2,286.7	\$ (182.5)	(8)%
Gross margin	\$ 636.8	\$ 700.9	\$ (64.1)	(9)%	\$ 1,219.1	\$ 1,319.3	\$ (100.2)	(8)%
Percentage of net revenues	57.8%	58.2%			57.9%	57.7%		
Operating income	\$ 82.4	\$ 159.8	\$ (77.4)	(48)%	\$ 125.1	\$ 215.3	\$ (90.2)	(42)%
Percentage of net revenues	7.5%	13.3%			5.9%	9.4%		
Net income	\$ 46.2	\$ 116.5	\$ (70.3)	(60)%	\$ 77.3	\$ 150.9	\$ (73.6)	(49)%
Percentage of net revenues	4.2%	9.7%			3.7%	6.6%		
Net income per share:								
Basic	\$ 0.13	\$ 0.33	\$ (0.20)	(61)%	\$ 0.22	\$ 0.43	\$ (0.21)	(49)%
Diluted	\$ 0.13	\$ 0.33	\$ (0.20)	(61)%	\$ 0.22	\$ 0.42	\$ (0.20)	(48)%
Operating cash flows					\$ 248.2	\$ 441.4	\$ (193.2)	(44)%
Stock repurchase plan activity	\$ 300.0	\$ —	\$ 300.0	N/M	\$ 300.0	\$ 750.0	\$ (450.0)	(60)%
Cash dividends declared per common stock	\$ 0.19	\$ 0.18	\$ 0.01	6 %	\$ 0.38	\$ 0.36	\$ 0.02	6 %
DSO	54	52	2	4 %				

	As of			
	June 30, 2019	December 31, 2018	\$ Change	% Change
Deferred revenue	\$ 1,201.4	\$ 1,213.6	\$ (12.2)	(1)%
Product deferred revenue	\$ 133.4	\$ 144.4	\$ (11.0)	(8)%
Service deferred revenue	\$ 1,068.0	\$ 1,069.2	\$ (1.2)	— %

N/M - Not meaningful

- **Net Revenues:** Net revenues decreased during the three and six months ended June 30, 2019 , compared to the same periods in 2018 , primarily due to lower routing and switching revenues from our Service Provider and Enterprise verticals respectively. We experienced a decline in our Service Provider vertical due to the timing of deployments. Our service net revenues increased during the three months ended June 30, 2019 , compared to the same periods in 2018, primarily due to strong renewal and attach rates of support contracts.

Of our top ten customers for the second quarter of 2019 , four were Cloud, five were Service Provider, and one was in Enterprise. Of these customers, three were located outside of the U.S.

- **Gross Margin :** Our gross margin as a percentage of net revenues decreased during the three and six months ended June 30, 2019 , compared to the same periods in 2018 , primarily due to higher amortization of intangible assets associated with the acquisition of Mist and lower product revenue, partially offset by higher service revenues and lower service delivery costs.
- **Operating Margin:** Our operating income as a percentage of net revenues decreased during the three and six months ended June 30, 2019 , compared to the same periods in 2018 , primarily due to the drivers described in the gross margin discussion above, and higher restructuring costs during the first half of 2019 that we did not incur during the same period in 2018 . The decrease in operating margin during the three and six months ended June 30, 2019 was partially offset by lower personnel-related expenses compared to the same periods in 2018 .

- *Operating Cash Flows:* Net cash provided by operations decreased during the six months ended June 30, 2019 , compared to the same period in 2018 . The decrease was primarily due to lower cash collections from customers as a result of lower invoicing, partially offset by a decrease in cash payments to suppliers.
- *Capital Return:* We continue to return capital to our stockholders. During the three months ended June 30, 2019 , we entered into an accelerated share repurchase program (the "ASR") to purchase an aggregate of \$300.0 million in shares. Under the ASR, we made an upfront payment of \$300.0 million and received an initial delivery of 8.6 million shares for an aggregate price of \$240.0 million . The ASR is still underway and is expected to settle no later than September 26, 2019 . During the three and six months ended June 30, 2019 , we also paid quarterly dividends of \$0.19 per share, for an aggregate amount of \$65.5 million and \$131.7 million , respectively.
- *DSO:* DSO is calculated as the ratio of ending accounts receivable, net of allowances, divided by average daily net revenues for the preceding 90 days. DSO for the second quarter of 2019 slightly increased , compared to the same period in 2018 , primarily due to lower revenues, partially offset by lower accounts receivable resulting from lower overall invoicing volume.
- *Deferred Revenue:* Total deferred revenue decreased as of June 30, 2019 , compared to December 31, 2018 , primarily due to the timing of the delivery of contractual commitments.

Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires us to make judgments, assumptions, and estimates that affect the amounts reported in the Condensed Consolidated Financial Statements and the accompanying notes. On an ongoing basis, we evaluate our estimates and assumptions. These estimates and assumptions are based on current facts, historical experience, and various other factors that we believe are reasonable under the circumstances to determine reported amounts of assets, liabilities, revenues, and expenses that are not readily apparent from other sources.

During the six months ended June 30, 2019 , except for the change in accounting estimates and changes in certain accounting policies related to the adoption of Topic 842 described in Note 2, *Summary of Significant Accounting Policies* , in the Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report, there were no material changes to our critical accounting policies and estimates as compared to the critical accounting policies and estimates disclosed in Management's Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, Item 7 of our Form 10-K.

Recent Accounting Pronouncements

See Note 2, *Summary of Significant Accounting Policies* , in the Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report, for a full description of the recently adopted accounting standards and recent accounting standards not yet adopted, including the actual and expected dates of adoption and estimated effects on our consolidated results of operations and financial condition, which is incorporated herein by reference.

Results of Operations

Revenues

The following table presents net revenues by product and service, customer vertical (*), and geographic region (in millions, except percentages):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	\$ Change	% Change	2019	2018	\$ Change	% Change
Routing	\$ 416.9	\$ 490.6	\$ (73.7)	(15)%	\$ 791.6	\$ 898.7	\$ (107.1)	(12)%
Switching	215.6	254.8	(39.2)	(15)%	392.0	484.8	(92.8)	(19)%
Security	81.4	79.5	1.9	2 %	149.0	152.2	(3.2)	(2)%
Total Product	713.9	824.9	(111.0)	(13)%	1,332.6	1,535.7	(203.1)	(13)%
Percentage of net revenues	64.8%	68.5%			63.3%	67.2%		
Total Service	388.6	379.2	9.4	2 %	771.6	751.0	20.6	3 %
Percentage of net revenues	35.2%	31.5%			36.7%	32.8%		
Total net revenues	\$ 1,102.5	\$ 1,204.1	\$ (101.6)	(8)%	\$ 2,104.2	\$ 2,286.7	\$ (182.5)	(8)%
Cloud	\$ 285.0	\$ 284.4	\$ 0.6	— %	\$ 508.2	\$ 555.3	\$ (47.1)	(8)%
Percentage of net revenues	25.8%	23.6%			24.1%	24.3%		
Service Provider	447.2	524.9	(77.7)	(15)%	882.8	1,005.0	(122.2)	(12)%
Percentage of net revenues	40.6%	43.6%			42.0%	43.9%		
Enterprise	370.3	394.8	(24.5)	(6)%	713.2	726.4	(13.2)	(2)%
Percentage of net revenues	33.6%	32.8%			33.9%	31.8%		
Total net revenues	\$ 1,102.5	\$ 1,204.1	\$ (101.6)	(8)%	\$ 2,104.2	\$ 2,286.7	\$ (182.5)	(8)%
Americas:								
United States	\$ 601.2	\$ 624.8	\$ (23.6)	(4)%	\$ 1,077.8	\$ 1,157.1	\$ (79.3)	(7)%
Other	47.6	50.9	(3.3)	(6)%	114.6	106.2	8.4	8 %
Total Americas	648.8	675.7	(26.9)	(4)%	1,192.4	1,263.3	(70.9)	(6)%
Percentage of net revenues	58.8%	56.1%			56.7%	55.2%		
EMEA	291.9	308.9	(17.0)	(6)%	578.1	616.9	(38.8)	(6)%
Percentage of net revenues	26.5%	25.7%			27.5%	27.0%		
APAC	161.8	219.5	(57.7)	(26)%	333.7	406.5	(72.8)	(18)%
Percentage of net revenues	14.7%	18.2%			15.8%	17.8%		
Total net revenues	\$ 1,102.5	\$ 1,204.1	\$ (101.6)	(8)%	\$ 2,104.2	\$ 2,286.7	\$ (182.5)	(8)%

(*) Certain insignificant prior-period amounts have been reclassified to conform to the current-period presentation.

Three Months Ended June 30, 2019 compared with the Three Months Ended June 30, 2018

Product net revenues decreased during the three months ended June 30, 2019 , compared to the same period in 2018 , primarily due to Service Provider and Enterprise, impacting routing and switching.

Routing and switching revenue decreased during the three months ended June 30, 2019 , compared to the same period in 2018 , primarily due to a decrease in our Service Provider vertical resulting from lower net revenues from our MX product family, and a decrease in our Enterprise vertical resulting from lower net revenues from our QFX product family.

Service net revenues increased during the three months ended June 30, 2019 , compared to the same period in 2018 , primarily due to strong renewal and attach rates of support contracts.

Six Months Ended June 30, 2019 compared with the Six Months Ended June 30, 2018

Product net revenues decreased during the six months ended June 30, 2019 , compared to the same period in 2018 , primarily due to Service Provider and Cloud, impacting routing and switching.

Routing and switching revenue decreased during the six months ended June 30, 2019 , compared to the same period in 2018 , primarily due to a decrease in our Service Provider vertical resulting from lower net revenues from our MX product family, and a decrease in our Cloud vertical resulting in lower net revenues from our QFX product family.

Service net revenues increased during the six months ended June 30, 2019 , compared to the same period in 2018 , due to strong renewal and attach rates of support contracts.

Gross Margins

The following table presents gross margins (in millions, except percentages):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	\$ Change	% Change	2019	2018	\$ Change	% Change
Product gross margin	\$ 399.6	\$ 488.3	\$ (88.7)	(18)%	\$ 748.3	\$ 892.7	\$ (144.4)	(16)%
Percentage of product revenues	56.0%	59.2%			56.2%	58.1%		
Service gross margin	237.2	212.6	24.6	12 %	470.8	426.6	44.2	10 %
Percentage of service revenues	61.0%	56.1%			61.0%	56.8%		
Total gross margin	\$ 636.8	\$ 700.9	\$ (64.1)	(9)%	\$ 1,219.1	\$ 1,319.3	\$ (100.2)	(8)%
Percentage of net revenues	57.8%	58.2%			57.9%	57.7%		

Our gross margins as a percentage of net revenues have been and will continue to be affected by a variety of factors, including the mix and average selling prices of our products and services, new product introductions and enhancements, manufacturing, component and logistics costs, expenses for inventory obsolescence and warranty obligations, cost of support and service personnel, customer mix as we continue to expand our footprint with certain strategic customers, the mix of distribution channels through which our products and services are sold, and import tariffs. For example, the United States imposed a tariff on networking products imported from China, which includes certain products that we import into and sell within the United States. For more information on the potential impact of tariffs on our business, see the “Risk Factors” section of Item 1A of Part II of this Report .

Three Months Ended June 30, 2019 compared with the Three Months Ended June 30, 2018

Product gross margin

Product gross margin as a percentage of product revenues decreased during the three months ended June 30, 2019 , compared to the same period in 2018 , primarily due to higher amortization of intangible assets associated with the recent acquisition of Mist, lower revenue, partially offset by growth in our software revenue. We continue to undertake specific efforts to address certain factors impacting our product gross margin. These efforts include performance and quality improvements through engineering to increase value across our products; optimizing our supply chain and service business; pricing management; and increasing software and solution sales; however, there can be no guarantee that these efforts will be successful or that they will be realized in the time frame we anticipate.

Service gross margin

Service gross margin as a percentage of service net revenues increased during the three months ended June 30, 2019 , compared to the same period in 2018 , primarily due to lower service delivery costs and higher revenue.

Six Months Ended June 30, 2019 compared with the Six Months Ended June 30, 2018

Product gross margin

Product gross margin as a percentage of product revenues decreased during the six months ended June 30, 2019 , compared to the same period in 2018 , primarily due to lower revenue, partially offset by growth in our software revenue.

Service gross margin

Service gross margin as a percentage of service net revenues increased during the six months ended June 30, 2019 , compared to the same period in 2018 , primarily due to lower service delivery costs and a one-time recovery of goods and services tax.

Operating Expenses

The following table presents operating expenses (in millions, except percentages):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	\$ Change	% Change	2019	2018	\$ Change	% Change
Research and development	\$ 244.0	\$ 248.8	\$ (4.8)	(2)%	\$ 471.6	\$ 518.2	\$ (46.6)	(9)%
Percentage of net revenues	22.1%	20.6 %			22.4%	22.7 %		
Sales and marketing	229.0	238.3	(9.3)	(4)%	457.5	477.7	(20.2)	(4)%
Percentage of net revenues	20.8%	19.8 %			21.7%	20.9 %		
General and administrative	60.0	54.2	5.8	11 %	128.2	110.2	18.0	16 %
Percentage of net revenues	5.5%	4.5 %			6.1%	4.8 %		
Restructuring charges (benefits)	21.4	(0.2)	21.6	N/M	36.7	(2.1)	38.8	N/M
Percentage of net revenues	1.9%	— %			1.8%	(0.1)%		
Total operating expenses	\$ 554.4	\$ 541.1	\$ 13.3	2 %	\$ 1,094.0	\$ 1,104.0	\$ (10.0)	(1)%
Percentage of net revenues	50.3%	44.9 %			52.0%	48.3 %		

N/M - Not meaningful

Three Months Ended June 30, 2019 compared with the Three Months Ended June 30, 2018

During the three months ended June 30, 2019 , compared to the same period in 2018 , total operating expenses increased primarily due to higher restructuring charges in connection with a restructuring plan that was initiated in the first quarter of 2019 (the "2019 Restructuring Plan"). During the second quarter of 2019, the Company amended the 2019 Restructuring Plan and undertook certain further actions that resulted in additional severance, additional facility consolidation, and contract termination costs. The increase in total operating expenses was partially offset by lower personnel-related expenses, driven by a decrease in variable compensation expense, specifically in sales and marketing, or S&M, and lower salaries and wages driven by a decrease in headcount as a result of restructuring actions.

Six Months Ended June 30, 2019 compared with the Six Months Ended June 30, 2018

During the six months ended June 30, 2019 , compared to the same period in 2018 , total operating expenses decreased primarily due to lower personnel-related expenses, driven by a decrease in share-based compensation expense, specifically in research and development, or R&D, and lower salaries and wages driven by a decrease in headcount as a result of restructuring actions, specifically in S&M. Our general and administrative increased primarily due to costs related to the acquisition of Mist Systems. The decrease in total operating expenses was partially offset by higher restructuring charges.

Other Expense, Net

The following table presents other expense, net (in millions, except percentages):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	\$ Change	% Change	2019	2018	\$ Change	% Change
Interest income	\$ 19.8	\$ 16.0	\$ 3.8	24 %	\$ 43.3	\$ 30.9	\$ 12.4	40 %
Interest expense	(22.0)	(25.9)	3.9	(15)%	(46.2)	(51.9)	5.7	(11)%
(Loss) gain on investments, net	(2.8)	0.6	(3.4)	N/M	(1.2)	0.1	(1.3)	N/M
Other	0.4	0.4	—	— %	1.3	(2.1)	3.4	N/M
Total other expense, net	<u>\$ (4.6)</u>	<u>\$ (8.9)</u>	<u>\$ 4.3</u>	<u>(48)%</u>	<u>\$ (2.8)</u>	<u>\$ (23.0)</u>	<u>\$ 20.2</u>	<u>(88)%</u>
Percentage of net revenues	(0.4)%	(0.7)%			(0.1)%	(1.0)%		

N/M - Not meaningful

Three Months Ended June 30, 2019 compared with the Three Months Ended June 30, 2018

Total other expense, net decreased during the three months ended June 30, 2019 , compared to the same period in 2018 , primarily due to a decrease in interest expense, as a result of lower total debt, and an increase in interest income related to our fixed income investment portfolio, as a result of higher yields.

Six Months Ended June 30, 2019 compared with the Six Months Ended June 30, 2018

Total other expense, net decreased during the six months ended June 30, 2018 , compared to the same period in 2018 , primarily due to an increase in interest income related to our fixed income investment portfolio, as a result of higher yields.

Income Tax Provision

	Three Months Ended June 30,				Six Months Ended June 30,			
	2019	2018	\$ Change	% Change	2019	2018	\$ Change	% Change
Income tax provision	\$ 31.6	\$ 34.4	\$ (2.8)	(8)%	\$ 45.0	\$ 41.4	\$ 3.6	9%
Effective tax rate	40.6%	22.8%			36.8%	21.5%		

The effective tax rate increased during the three and six months ended June 30, 2019, compared to the same periods in 2018, primarily due to a change in the level of discrete items in the comparative period. For further explanation of our income tax provision, see Note 13, *Income Taxes*, in Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report.

On July 24, 2018, the Ninth Circuit Court of Appeals, or the Court, issued an opinion in *Altera Corp. v. Commissioner* requiring related parties in an intercompany cost-sharing arrangement to share expenses related to share-based compensation. On August 7, 2018, the Court withdrew its opinion to allow time for a reconstituted panel to confer. On June 7, 2019, the Court upheld the cost-sharing regulations, subject to the right of appeal by Altera. On July 22, 2019, Altera petitioned the Court for rehearing. We will continue to monitor ongoing developments and potential impacts to our financial statements. If a judicial decision against Altera had been finalized in the reporting period, our effective tax rate for the three and six months ended June 30, 2019 would have been higher.

Our effective tax rate may fluctuate significantly on a quarterly basis and may be adversely affected by lower than anticipated earnings in countries that have lower statutory rates or higher than anticipated earnings in countries that have higher statutory rates, by the effect of U.S. income tax on certain foreign earnings and through the imposition of base-erosion prevention measures which may limit the deduction of certain transfer pricing payments. Our effective tax rate may also fluctuate due to changes in the valuation of our deferred tax assets or liabilities, or by changes in tax laws, regulations, or accounting principles, as well as certain discrete items. See the "Risk Factors" section of Item 1A of Part II of this Report for a description of relevant risks which may adversely affect our results.

As a result of recommendations by the Organisation for Economic Cooperation and Development, or OECD, on Base Erosion and Profit Shifting, certain countries in EMEA and APAC have either enacted new corporate tax legislation or are considering enacting such legislation in the near future. We expect the effect of these reform measures to potentially impact long-standing tax principles, particularly in regard to transfer pricing. Consequently, we expect global tax authorities to increasingly challenge our cost sharing and other intercompany arrangements, and the related sourcing of taxable profits in global jurisdictions.

Liquidity and Capital Resources

We have funded our business primarily through our operating activities and the issuance of our long-term debt. The following table presents our capital resources (in millions, except percentages):

	As of		\$ Change	% Change
	June 30, 2019	December 31, 2018		
Working capital	\$ 1,992.4	\$ 2,739.3	\$ (746.9)	(27)%
Cash and cash equivalents	\$ 1,381.3	\$ 2,489.0	\$ (1,107.7)	(45)%
Short-term investments	1,418.9	1,070.1	348.8	33 %
Long-term investments	74.8	199.0	(124.2)	(62)%
Total cash, cash equivalents, and investments	2,875.0	3,758.1	(883.1)	(23)%
Short-term portion of long-term debt	299.5	349.9	(50.4)	(14)%
Long-term debt	1,490.5	1,789.1	(298.6)	(17)%
Cash, cash equivalents, and investments, net of debt	\$ 1,085.0	\$ 1,619.1	\$ (534.1)	(33)%

Summary of Cash Flows

The following table summarizes cash flow activity from our Condensed Consolidated Statements of Cash Flows (in millions, except percentages):

	Six Months Ended June 30,			
	2019	2018	\$ Change	% Change
Net cash provided by operating activities	\$ 248.2	\$ 441.4	\$ (193.2)	(44)%
Net cash (used in) provided by investing activities	\$ (556.9)	\$ 1,083.3	\$ (1,640.2)	(151)%
Net cash used in financing activities	\$ (755.8)	\$ (866.4)	\$ 110.6	(13)%

Operating Activities

Net cash provided by operations decreased during the six months ended June 30, 2019, compared to the same period in 2018. The decrease was primarily due to lower cash collections from customers as a result of lower invoicing, partially offset by a decrease in cash payments to suppliers.

Investing Activities

Net cash used in investing activities was \$556.9 million during the six months ended June 30, 2019, compared to net cash provided by investing activities of \$1,083.3 million for the same period in 2018. During the six months ended June 30, 2019, the payment for the acquisition of Mist was \$270.9 million and net purchases of investments was \$230.8 million. During the six months ended June 30, 2018, net proceeds from sales, maturities and redemptions of investments was \$1,194.1 million, primarily from the liquidation of repatriated offshore investments to fund the accelerated share repurchase program ("2018 ASR") discussed below.

Financing Activities

Net cash used in financing activities decreased during the six months ended June 30, 2019, compared to the same period in 2018. The decrease was primarily due to the payment of \$750.0 million pursuant to the 2018 ASR during the six months ended June 30, 2018 compared to the payment of \$300.0 million pursuant to a new accelerated share repurchase program ("2019 ASR") for the same period in 2019 as described further below, partially offset by the payment of \$350.0 million for our Senior Notes that matured during the six months ended June 30, 2019.

Capital Return

In January 2018, our Board of Directors, which we refer to as the Board, approved a \$2.0 billion share repurchase program, which we refer to as the 2018 Stock Repurchase Program. As part of the 2018 Stock Repurchase Program in February 2018, we entered into the 2018 ASR to repurchase \$750.0 million of our common stock. We made an up-front payment of \$750.0 million pursuant to the 2018 ASR to repurchase our common stock. The aggregate number of shares ultimately repurchased of 29.3 million shares of common stock was determined based on a volume weighted average repurchase price, less an agreed upon discount, of \$25.62 per share.

On April 29, 2019, we entered into the 2019 ASR, to repurchase an aggregate of approximately \$300.0 million of our outstanding common stock. We made an up-front payment of \$300.0 million pursuant to the 2019 ASR and received and retired an initial 8.6 million shares of our common stock for an aggregate price of \$240.0 million based on the market value of our common stock on the date of the transaction.

As of June 30, 2019, there was approximately \$1.0 billion of authorized funds remaining under the 2018 Stock Repurchase Program.

Future share repurchases under the 2018 Stock Repurchase Program will be subject to a review of the circumstances at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements. Our 2018 Stock Repurchase Program may be discontinued at any time. See Note 10, *Equity*, in the Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report for further discussion of our share purchase program.

We declared and paid cash dividends of \$0.19 per share, totaling \$65.5 million and \$131.7 million during the three and six months ended June 30, 2019, respectively. Any future dividends, and the establishment of record and payment dates, are subject to approval by the Board or an authorized committee thereof. See Note 16, *Subsequent Event*, in the Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report for discussion of our dividend declaration subsequent to June 30, 2019.

Revolving Credit Facility

In April 2019, we entered into a new credit agreement with certain institutional lenders that provides for a five-year \$500.0 million unsecured revolving credit facility (the “Revolving Credit Facility”), with an option to increase the Revolving Credit Facility by up to an additional \$200.0 million, subject to the lenders’ approval. The Prior Revolving Credit Facility was terminated substantially concurrently with our entering into the Revolving Credit Facility. The Revolving Credit Facility will terminate in April 2024, subject to two one-year maturity extension options, on the terms and conditions as set forth in the credit agreement. As of June 30, 2019, we were in compliance with all covenants in the Credit Agreement, and no amounts were outstanding.

Liquidity and Capital Resource Requirements

Liquidity and capital resources may be impacted by our operating activities as well as acquisitions, investments in strategic relationships, repurchases of additional shares of our common stock, and payment of cash dividends on our common stock. Following the enactment of the Tax Act, we repatriated approximately \$3.0 billion of our cash, cash equivalents, and investments balance from outside of the U.S. as of June 30, 2019. We expect the new territorial tax system to provide us with lower cost access to nearly all of our global free cash flow on an ongoing basis. Free cash flow is calculated as net cash provided by operating activities less capital expenditures. We intend to use the repatriated cash to invest in the business, support value-enhancing merger and acquisitions, or M&A, and fund our return of capital to stockholders. See Note 16, *Subsequent Event*, in Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report for our subsequent events impacting liquidity.

Based on past performance and current expectations, we believe that our existing cash and cash equivalents, short-term, and long-term investments, together with cash generated from operations and access to capital markets and the revolving credit facility will be sufficient to fund our operations; planned stock repurchases and dividends; capital expenditures; commitments and other liquidity requirements; and anticipated growth for at least the next twelve months. However, our future liquidity and capital requirements may vary materially from those now planned depending on many factors, including, but not limited to, our growth rate; the timing and amount we spend to support development efforts; the expansion of sales and marketing activities; the introduction of new and enhanced products and services; the costs to acquire or invest in businesses and technologies; an increase in manufacturing or component costs; and the risks and uncertainties detailed in the “Risk Factors” section of Item 1A of Part II of this Report.

Item 3. *Quantitative and Qualitative Disclosures About Market Risk*

Our exposures to market risk have not changed materially since December 31, 2018. For quantitative and qualitative disclosures about market risk, see Item 7A Quantitative and Qualitative Disclosures about Market Risk, in our Form 10-K.

Item 4. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

Attached as exhibits to this Report are certifications of our principal executive officer and principal financial officer, which are required in accordance with Rule 13a-14 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). This “Controls and Procedures” section includes information concerning the controls and related evaluations referred to in the certifications and it should be read in conjunction with the certifications for a more complete understanding of the topics presented.

We carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon that evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered in this Report, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Controls Over Financial Reporting

There were no changes in our internal control over financial reporting during the second quarter of 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. *Legal Proceedings*

The information set forth under the “Legal Proceedings” section in Note 15, *Commitments and Contingencies*, in Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report, is incorporated herein by reference.

Item 1A. *Risk Factors*

Factors That May Affect Future Results

Investments in our securities involve significant risks. Even small changes in investor expectations for our future growth and earnings, whether as a result of actual or rumored financial or operating results, changes in the mix of the products and services sold, acquisitions, industry changes, or other factors, could trigger, and have triggered in the past, significant fluctuations in the market price of our common stock. Investors in our securities should carefully consider all of the relevant factors disclosed by us, including, but not limited to, the following factors, that could affect our business, operating results, and stock price.

Our quarterly results are unpredictable and subject to substantial fluctuations; as a result, we may fail to meet the expectations of securities analysts and investors, which could adversely affect the trading price of our common stock.

Our revenues and operating results may vary significantly from quarter-to-quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate.

The factors that may cause our quarterly results to vary quarter by quarter and be unpredictable include, but are not limited to:

- unpredictable ordering patterns and limited or reduced visibility into our customers’ spending plans and associated revenue;
- changes in customer mix;
- changes in the demand for our products and services;
- changes in the mix of products and services sold;
- changes in the mix of geographies in which our products and services are sold;
- changing market and economic conditions, including the impact of tariffs;
- current and potential customer, partner and supplier consolidation and concentration;
- price and product competition;
- long sales, qualification and implementation cycles;
- success in new and evolving markets and emerging technologies;
- how well we execute on our strategy and operating plans and the impact of changes in our business model that could result in significant restructuring charges;
- ability of our customers, channel partners, contract manufacturers and suppliers to purchase, market, sell, manufacture or supply our products (or components of our products) and services;
- financial stability of our customers, including the solvency of private sector customers and statutory authority for government customers to purchase goods and services;
- our ability to achieve targeted cost reductions;
- changes in tax laws or accounting rules, or interpretations thereof;
- changes in the amount and frequency of share repurchases or dividends;
- regional economic and political conditions; and
- seasonality.

For example, we, and many companies in our industry, experience adverse seasonal fluctuations in customer spending, particularly in the first quarter. In addition, while we may have backlog orders for products that have not shipped, we believe that our backlog may not be a reliable indicator of future operating results for a number of reasons, including project delays, changes in project scope and the fact that our customers may cancel purchase orders or change delivery schedules without significant penalty. Furthermore, market trends, competitive pressures, commoditization of products, rebates and discounting, increased component or logistics costs, issues with product quality, regulatory impacts, tariffs and other factors may result in reductions in revenue or pressure on gross margins in a given period, which may necessitate adjustments to our operations. Such adjustments may be difficult or impossible to execute in the short or medium term.

As a result of the factors described above, as well as other variables affecting our operating results, we believe that quarter-to-quarter comparisons of operating results are not necessarily a good indication of what our future performance will be. In some

prior periods, our operating results have been below our guidance, our long-term financial model or the expectations of securities analysts or investors, which has at times coincided with a decline in the price of our common stock. This may happen again in the future, in which case the price of our common stock may decline. Such a decline could also occur, and has occurred in the past, even when we have met our publicly stated revenues and/or earnings guidance.

We expect our gross margins and operating margins to vary over time.

We expect our product and service gross margins to vary, both in the near-term and in the long-term, and may be adversely affected in the future by numerous factors, some of which have occurred and may occur in the future, including customer, vertical, product and geographic mix shifts, an increase or decrease in our software sales or services we provide, increased price competition in one or more of the markets in which we compete, changes in the actions of our competitors or their pricing strategies, which may be difficult to predict and respond to, modifications to our pricing strategy in order to gain footprint in certain markets or with certain customers, currency fluctuations that impact our costs or the cost of our products and services to our customers, increases in material, labor, logistics, warranty costs, or inventory carrying costs, excess product component or obsolescence charges from our contract manufacturers, issues with manufacturing or component availability, quality or efficiencies, increased costs due to changes in component pricing or charges incurred due to inaccurately forecasting product demand, warranty related issues, the impact of tariffs, or our introduction of new products and enhancements or entry into new markets with different pricing and cost structures. For example, in fiscal year 2018, our margins decreased as compared to fiscal year 2017, primarily due to lower product net revenues and product mix. In fiscal year 2017, our margins decreased as compared to fiscal year 2016, primarily due to lower product net revenues and product mix, resulting from the year-over-year decline in routing revenues, our customers' architectural shifts, and higher costs of certain memory components. In fiscal year 2016, our margins decreased compared to fiscal year 2015, primarily due to elevated pricing pressure and product mix. Failure to sustain or improve our gross margins reduces our profitability and may have a material adverse effect on our business and stock price.

Further, while we will continue to remain diligent in our long-term financial objective to increase revenue and operating margins and manage our operating expenses as a percentage of revenue, we expect that our margins will vary with our ability to achieve these goals. We can provide no assurance that we will be able to achieve all or any of the goals of these plans or meet our announced expectations, in whole or in part, or that our plans will have the intended effect of improving our margins on the expected timeline, or at all.

A limited number of our customers comprise a material portion of our revenues and any changes in the way they purchase products and services from us could affect our business. In addition, there is an ongoing trend toward consolidation in the industry in which our customers and partners operate. Any decrease in revenues from our customers or partners could have an adverse effect on our net revenues and operating results.

A material portion of our net revenues, across each customer vertical, depends on sales to a limited number of customers and distribution partners. Changes in the business requirements or focus, vendor selection, project prioritization, financial prospects, capital resources, and expenditures, or purchasing behavior (including product mix purchased or delays in deployment) of our key customers could significantly decrease our sales to such customers or could lead to delays or cancellations of planned purchases of our products or services, which increases the risk of quarterly fluctuations in our revenues and operating results. Any of these factors could adversely affect our business, financial condition, and results of operations.

In addition, in recent years, there has been movement towards consolidation in the telecommunications industry (for example, CenturyLink, Inc.'s acquisition of Level 3 Communications, Inc., Vodafone India's acquisition of Idea Cellular Ltd. and T-Mobile US, Inc.'s proposed acquisition of Sprint Corp., which was recently approved by the U.S. Justice Department.) and that consolidation trend has continued. Certain telecommunications companies have also moved towards vertical consolidation through acquisitions of media and content companies, such as Verizon's acquisition of Yahoo, AT&T's acquisition of Time Warner, and Comcast's acquisition of Sky. If our customers or partners are parties to consolidation transactions they may delay, suspend or indefinitely reduce or cancel their purchases of our products or other direct or indirect unforeseen consequences could harm our business, financial condition, and results of operations.

Fluctuating economic conditions make it difficult to predict revenues and gross margin for a particular period and a shortfall in revenues or increase in costs of production may harm our operating results.

Our revenues and gross margin depend significantly on general economic conditions and the demand for products in the markets in which we compete. Economic weakness or uncertainty, customer financial difficulties, and constrained spending on network expansion and enterprise infrastructure have in the past resulted in, and may in the future result in, decreased revenues and earnings. Such factors could make it difficult to accurately forecast revenues and operating results and could negatively affect our ability to

provide accurate forecasts to our contract manufacturers and manage our contract manufacturer relationships and other expenses. In addition, economic instability or uncertainty, as well as continued turmoil in the geopolitical environment in many parts of the world, have, and may continue to, put pressure on economic conditions, which has led and could lead, to reduced demand for our products, to delays or reductions in network expansions or infrastructure projects, and/or higher costs of production. More generally-speaking, economic weakness may also lead to longer collection cycles for payments due from our customers, an increase in customer bad debt, restructuring initiatives and associated expenses, and impairment of investments. Furthermore, instability in the global markets may adversely impact the ability of our customers to adequately fund their expected expenditures, which could lead to delays or cancellations of planned purchases of our products or services. Our operating expenses are largely based on anticipated revenue trends and a high percentage of our expenses is, and will continue to be, fixed in the short and medium term. Uncertainty about future economic conditions also makes it difficult to forecast operating results and to make decisions about future investments. Future or continued economic weakness, failure of our customers and markets to recover from such weakness, customer financial difficulties, increases in costs of production, and reductions in spending on network maintenance and expansion could result in price concessions in certain markets or have a material adverse effect on demand for our products and consequently on our business, financial condition, and results of operations.

Our success depends upon our ability to effectively plan and manage our resources and restructure our business through rapidly fluctuating economic and market conditions, and such actions may have an adverse effect on our financial and operating results.

Our ability to successfully offer our products and services in a rapidly evolving market requires an effective planning, forecasting, and management process to enable us to effectively scale and adjust our business and business models in response to fluctuating market opportunities and conditions.

From time to time, we have increased investment in our business by, for example, increasing headcount, acquiring companies, and increasing our investment in R&D, sales and marketing, and other parts of our business. Conversely, in 2017, 2018, and 2019, we initiated restructuring plans to realign our workforce as a result of organizational and leadership changes, align our execution priorities, increase operational efficiencies, and to consolidate facilities which resulted in restructuring charges in each of these years. Some of our expenses related to such efforts are fixed costs that cannot be rapidly or easily adjusted in response to fluctuations in our business or numbers of employees. Rapid changes in the size, alignment or organization of our workforce, including sales account coverage, could adversely affect our ability to develop and deliver products and services as planned or impair our ability to realize our current or future business and financial objectives. Our ability to achieve the anticipated cost savings and other benefits from our restructuring initiatives within the expected time frame is subject to many estimates and assumptions, which are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. If these estimates and assumptions are incorrect, if we are unsuccessful at implementing changes, or if other unforeseen events occur, our business and results of operations could be adversely affected.

We face intense competition that could reduce our revenues and adversely affect our business and financial results.

Competition is intense in the markets that we serve. The routing and switching markets have historically been dominated by Cisco Systems, Inc., or Cisco, with competition coming from other companies such as Nokia Corporation, Arista Networks, Inc., Hewlett Packard Enterprise Co., and Huawei Technologies Co., Ltd. In the security market, we face intense competition from Cisco and Palo Alto Networks, Inc., as well as companies such as Check Point Software Technologies, Ltd., and Fortinet, Inc. Further, a number of other small public and private companies have products or have announced plans for new products to address the same challenges and markets that our products address.

In addition, actual or speculated consolidation among competitors, or the acquisition by, or of, our partners and/or resellers by competitors can increase the competitive pressures faced by us as customers may delay spending decisions or not purchase our products at all. A number of our competitors have substantially greater resources and can offer a wider range of products and services for the overall network equipment market than we do. In addition, some of our competitors have become more integrated, including through consolidation and vertical integration, and offer a broader range of products and services, which could make their solutions more attractive to our customers. Many of our competitors sell networking products as bundled solutions with other IT products, such as computer and storage systems. If we are unable to compete successfully against existing and future competitors on the basis of product offerings or price, we could experience a loss in market share and revenues and/or be required to reduce prices, which could reduce our gross margins, and which could materially and adversely affect our business, financial condition, and results of operations. Our partners and resellers generally sell or resell competing products on a non-exclusive basis and consolidation could delay spending or require us to increase discounts to compete, which could also adversely affect our business.

The long sales and implementation cycles for our products, as well as our expectation that some customers will sporadically place large orders with short lead times, may cause our revenues and operating results to vary significantly from quarter-to-quarter.

A customer's decision to purchase certain of our products, particularly new products, involves a significant commitment of its resources and a lengthy evaluation and product qualification process. As a result, the sales cycle may be lengthy. In particular, customers making critical decisions regarding the design and implementation of large network deployments may engage in very lengthy procurement processes that may delay or impact expected future orders. Throughout the sales cycle, we may spend considerable time educating and providing information to prospective customers regarding the use and benefits of our products. Even after making the decision to purchase, customers may deploy our products slowly and deliberately. Timing of deployment can vary widely and depends on the skill set of the customer, the size of the network deployment, the complexity of the customer's network environment, and the degree of hardware and operating system configuration necessary to deploy the products. Customers with large networks usually expand their networks in large increments on a periodic basis. Accordingly, we may receive purchase orders for significant dollar amounts on an irregular basis. These long cycles, as well as our expectation that customers will tend to sporadically place large orders with short lead times, both of which may be exacerbated by the impact of global economic weakness, may cause revenues and operating results to vary significantly and unexpectedly from quarter-to-quarter.

The timing of product orders and/or our reliance on revenue from sales of certain software or subscriptions and professional, support and maintenance services may cause us to recognize revenue in a different period than the one in which a transaction takes place.

Due to the cost, complexity and custom nature of configurations required by our customers, we generally build our network equipment products as orders are received. The volume of orders received late in any given fiscal quarter remains unpredictable. If orders for certain products are received late in any quarter, we may not be able to recognize revenue for these orders in the same period, which could adversely affect our ability to meet our expected revenues for such quarter.

In addition, services revenue accounts for a significant portion of our revenue, comprising 33%, 31%, and 29% of total revenue in fiscal year 2018, 2017, and 2016, respectively. Sales of new or renewal professional services, support and maintenance contracts may decline and/or fluctuate as a result of a number of factors, including end-customers' level of satisfaction with our products and services, the prices of our products and services or those offered by our competitors, and reductions in our end-customers' spending levels. We recognize professional services, support and maintenance revenue periodically over the term of the relevant service period.

The introduction of new software products and services is part of our intended strategy to expand our software business, and certain software revenues may be recognized periodically over the term of the relevant use period or subscription period. As a result, certain software, subscription and support and maintenance revenue we report each fiscal quarter is the recognition of deferred revenue from contracts entered into during previous fiscal quarters. Consequently, a decline in such new or renewed contracts in any one fiscal quarter will not be fully or immediately reflected in revenue in that fiscal quarter but will negatively affect our revenue in future fiscal quarters. Accordingly, the effect of significant downturns in new or renewed sales of certain software products, subscriptions or support and maintenance is not reflected in full in our operating results until future periods. Also, it is difficult for us to rapidly increase such software or services revenue through additional sales in any period, as revenue from those software, subscription and support and maintenance contracts must be recognized over the applicable period.

Additionally, we determine our operating expenses largely on the basis of our anticipated revenues and technology roadmap and a high percentage of our expenses are fixed in the short and medium term. As a result, a failure or delay in generating or recognizing revenue could cause significant variations in our operating results and operating margin from quarter-to-quarter.

We sell our products to customers that use those products to build networks and IP infrastructure, and if the demand for network and IP systems does not continue to grow, our business, financial condition, and results of operations could be adversely affected.

A substantial portion of our business and revenues depends on the growth of secure IP infrastructure and customers that depend on the continued growth of IP services to deploy our products in their networks and IP infrastructures. As a result of changes in the economy, capital spending or the building of network capacity in excess of demand (all of which, have in the past, particularly affected telecommunications service providers), spending on IP infrastructure can vary, which could have a material adverse effect on our business, financial condition, and results of operations. In addition, a number of our existing customers are evaluating the build-out of their next generation networks. During the decision-making period when our customers are determining the design of those networks and the selection of the software and equipment they will use in those networks, such customers may greatly

reduce or suspend their spending on secure IP infrastructure. For example, in recent years, our switching and routing results were adversely affected by spending delays from our largest Cloud customers, who we believe are in the process of implementing a networking architectural shift. The duration of the delay is difficult to predict, in part because each Cloud customer will migrate their network architecture based on their own constraints. Such delays in purchases can make it more difficult to predict revenues from customers, can cause fluctuations in the level of spending by customers and, even where our products are ultimately selected, can have a material adverse effect on our business, financial condition, and results of operations.

If we do not successfully anticipate technological shifts, market needs and opportunities, and develop products, product enhancements and business strategies that meet those technological shifts, needs and opportunities, or if those products are not made available or strategies are not executed in a timely manner or do not gain market acceptance, we may not be able to compete effectively and our ability to generate revenues will suffer.

The markets for our products are characterized by rapid technological change, frequent new product introductions, changes in customer requirements, continuous pricing pressures and a constantly evolving industry. We may not be able to anticipate future technological shifts, market needs and opportunities or be able to develop new products, product enhancements or business strategies to meet such technological shifts, needs or opportunities in a timely manner or at all. For example, the move from traditional wide area network, or WAN, infrastructures towards software-defined WAN, or SD-WAN, has been receiving considerable attention. In our view, it will take several years to see the full impact of SD-WAN, and we believe the successful products and solutions in this market will combine hardware and software elements. If we fail to anticipate market requirements or opportunities or fail to develop and introduce new products, product enhancements or business strategies to meet those requirements or opportunities in a timely manner, it could cause us to lose customers, and such failure could substantially decrease or delay market acceptance and sales of our present and future products and services, which would significantly harm our business, financial condition, and results of operations. In addition, if we invest time, energy and resources in developing products for a market that does not develop, it could likewise significantly harm our business, financial condition, and results of operations. Even if we are able to anticipate, develop, and commercially introduce new products, enhancements or business strategies, there can be no assurance that new products, enhancements or business strategies will achieve widespread market acceptance.

In recent years, we have announced a number of new products and enhancements to our hardware and software products across routing, switching and security. The success of our new products depends on several factors, including, but not limited to, component costs, timely completion and introduction of these products, prompt resolution of any defects or bugs in these products, our ability to support these products, differentiation of new products from those of our competitors and market acceptance of these products.

The introduction of new software products is part of our intended strategy to expand our software business. We have also begun to disaggregate certain software from certain hardware products, such that customers would be able to purchase or license our hardware and software products independently, which we expect could in time enable our hardware to be deployed with third- party networking applications and services and our software to be used with third-party hardware. The success of our strategy to expand our software business, including our strategy to disaggregate software from certain hardware products, is subject to a number of risks and uncertainties, including:

- the additional development efforts and costs required to create new software products and/or to make our disaggregated products compatible with multiple technologies;
- the possibility that our new software products or disaggregated products may not achieve widespread customer adoption;
- the possibility that our strategy could erode our revenue and gross margins;
- the impact on our financial results of longer periods of revenue recognition for certain types of software products and changes in tax treatment associated with software sales;
- the additional costs associated with regulatory compliance and changes we need to make to our distribution chain in connection with increased software sales;
- the ability of our disaggregated hardware and software products to operate independently and/or to integrate with current and future third-party products; and
- issues with third-party technologies used with our disaggregated products may be attributed to us.

If any of our new products or business strategies do not gain market acceptance or meet our expectations for growth, our ability

to meet future financial targets may be adversely affected and our competitive position and our business and financial results could be harmed.

We are dependent on contract manufacturers with whom we do not have long-term supply contracts, and changes to or disruptions in those relationships or manufacturing processes, expected or unexpected, may result in delays that could cause us to lose revenues and damage our customer relationships.

We depend on independent contract manufacturers (each of which is a third-party manufacturer for numerous companies) to manufacture our products. Although we have contracts with our contract manufacturers, these contracts do not require them to manufacture our products on a long-term basis in any specific quantity or at any specific price. In addition, it is time-consuming and costly to qualify and implement additional contract manufacturer relationships. Therefore, if we fail to effectively manage our contract manufacturer relationships, which could include failing to provide accurate forecasts of our requirements, or if one or more of them experiences delays, disruptions, or quality control problems in their manufacturing operations, or if we had to change or add additional contract manufacturers or contract manufacturing sites, our ability to ship products to our customers could be delayed. We have experienced in the past and may experience in the future an increase in the expected time required to manufacture our products or ship products. Such delays could result in supply shortfalls that damage our ability to meet customer demand for those products and could cause our customers to purchase alternative products from our competitors. Also, the addition of manufacturing locations or contract manufacturers or the introduction of new products by us would increase the complexity of our supply chain management. Moreover, a significant portion of our manufacturing is performed in China and other foreign countries and is therefore subject to risks associated with doing business outside of the United States, including import tariffs, disruptions to our supply chain, or regional conflicts. For example, the United States recently imposed a tariff on networking products imported from China; this includes certain products that we import into and sell within the United States. If we cannot fully mitigate the impact of the tariffs, the increased cost could translate into higher prices for our customers, reduced customer demand or increased cost of goods sold. In addition, increased costs of production or delays in production caused by any relocation of contract manufacturing facilities could impact the global competitiveness of our products. Each of these factors could adversely affect our business, financial condition and results of operations.

We are dependent on sole source and limited source suppliers, including for key components, which makes us susceptible to shortages, quality issues or price fluctuations in our supply chain, and we may face increased challenges in supply chain management in the future.

We rely on single or limited sources for many of our components. During periods of high demand for electronic products, component shortages are possible, and the predictability of the availability of such components may be limited. For example, we have experienced industry-wide supply constraints related to power management components. In addition, some components used in our networking solutions have in the past and may in the future experience extended lead times and higher pricing, given the demand in the market. Any future spike in growth in our business, the use of certain components we share in common with other companies, in IT spending or the economy in general, is likely to create greater short-term pressures on us and our suppliers to accurately forecast overall component demand and to establish optimal component inventories. If shortages or delays persist, we may not be able to secure enough components at reasonable prices or of acceptable quality to build and deliver products in a timely manner, and our revenues, gross margins and customer relationships could suffer. Additionally, if certain components that we receive from our suppliers have defects or other quality issues, we may have to replace or repair such components, and we could be subject to claims based on warranty, product liability, epidemic or delivery failures that could lead to significant expenses. We maintain product liability insurance, but there is no guarantee that such insurance will be available or adequate to protect against all such claims. We have experienced, and from time-to-time may experience, component shortages or quality issues that resulted, or could result, in delays of product shipments, revenue charges that impact our gross margins, and/or warranty or other claims or costs. We also currently purchase numerous key components, including ASICs and other semiconductor chips, from single or limited sources and many of our component suppliers are concentrated in China and Korea. In addition, there has been consolidation among certain suppliers of our components. For example, GLOBALFOUNDRIES acquired IBM's semiconductor manufacturing business, Avago Technologies Limited acquired Broadcom Corporation and Intel Corporation acquired Altera Corporation. Consolidation among suppliers can result in the reduction of the number of independent suppliers of components available to us, which could negatively impact our ability to access certain component parts or the prices we have to pay for such parts which may impact our gross margins. In addition, our suppliers may determine not to continue a business relationship with us for other reasons that may be beyond our control or may seek to impose significant price increases. Any disruptions to our supply chain or significant increase in components cost could decrease our sales, earnings and liquidity or otherwise adversely affect our business and result in increased costs. Such a disruption could occur as a result of any number of events, including, but not limited to, increases in wages that drive up prices, the imposition of regulations, quotas or embargoes on components, labor stoppages, transportation failures affecting the supply chain and shipment of materials and finished goods, third-party interference in the integrity of the

products sourced through the supply chain, the unavailability of raw materials, severe weather conditions, natural disasters, civil unrest, military conflicts, geopolitical developments, war or terrorism and disruptions in utility and other services.

The development of alternate sources for components is time-consuming, difficult, and costly. In addition, the lead times associated with certain components are lengthy and preclude rapid changes in quantities and delivery schedules. Also, long-term supply and maintenance obligations to customers increase the duration for which specific components are required, which may further increase the risk of component shortages or the cost of carrying inventory. In the event of a component shortage, supply interruption or significant price increase from these suppliers, we may not be able to develop alternate or second sources in a timely manner. If we are unable to buy these components in quantities sufficient to meet our requirements on a timely basis, we will not be able to deliver products and services to our customers, which would seriously affect present and future sales, which would, in turn, adversely affect our business, financial condition, and results of operations.

In addition, the development, licensing, or acquisition of new products in the future may increase the complexity of supply chain management. Failure to effectively manage the supply of components and products would adversely affect our business.

If we fail to accurately predict our manufacturing requirements, we could incur additional costs or experience manufacturing delays, which would harm our business.

We provide demand forecasts for our products to our contract manufacturers and original design manufacturers, who order components and plan capacity based on these forecasts. If we overestimate our requirements, our original design or contract manufacturers may assess charges, or we may have liabilities for excess inventory, each of which could negatively affect our gross margins. For example, in certain prior quarters, our gross margins were reduced as a result of an inventory charge resulting from inventory we held in excess of forecasted demand. In addition, some optical modules we use are experiencing faster product transitions than our other products, which increases the risk that we could have excess inventory of those modules. Conversely, lead times for required materials and components vary significantly and depend on factors such as the specific supplier, contract terms, and the demand for each component at a given time. Given that our contract manufacturers are third-party manufacturers for numerous other companies, if we underestimate our requirements, as we have in certain prior quarters with respect to certain products, our contract manufacturers may have inadequate time, materials, and/or components required to produce our products. This could increase costs or delay or interrupt manufacturing of our products, resulting in delays in shipments and deferral or loss of revenues and could negatively impact customer satisfaction.

System security risks, data protection breaches, and cyber-attacks could compromise our and our customers' proprietary information, disrupt our internal operations and harm public perception of our products, which could cause our business and reputation to suffer and adversely affect our stock price.

In the ordinary course of business, we store sensitive data, including intellectual property, personal data, our proprietary business information and that of our employees, contractors, customers, suppliers and business partners on our networks. In addition, we store sensitive data through cloud-based services that may be hosted by third parties and in data center infrastructure maintained by third parties. The secure maintenance of this information is critical to our operations and business strategy. The growing cyber risk environment means that individuals, companies, and organizations of all sizes, including Juniper, have been and are increasingly subject to the threat of intrusions on their networks and systems by a wide range of actors, including but not limited to nation states, criminal enterprises, and terrorist organizations, on an ongoing and regular basis. Despite our security measures, and those of our third-party vendors, our information technology and infrastructure has experienced breaches and may be vulnerable in the future to breaches or attacks by computer programmers, hackers or sophisticated nation-state and nation-state supported actors or breaches due to employee error or wrongful conduct, malfeasance, or other disruptions. If any breach or attack compromises our networks, creates system disruptions or slowdowns or exploits security vulnerabilities of our products, the information stored on our networks or those of our customers, suppliers or business partners could be accessed and modified, publicly disclosed, lost, destroyed or stolen, and we may be subject to liability to our customers, suppliers, business partners and others, including regulatory entities, and suffer reputational and financial harm. In addition, hardware, components and software (including operating system software) and applications that we produce or procure from third parties may contain defects in design or manufacture, including "bugs", vulnerabilities and other problems that could unexpectedly interfere with the operation of our networks or expose us or our products to cyber attacks. This can be true even for "legacy" products that have been determined to have reached an end of life engineering status but will continue to operate for a limited amount of time. Furthermore, third parties may attempt to exfiltrate data through the introduction into the Information and Communications Technology supply chain of malicious products and components that are designed to defeat or circumvent encryption and other cybersecurity measures, and if successful, such actions could diminish customer trust in our products, harm our business reputation, and adversely affect our business and financial condition.

When vulnerabilities are discovered, we evaluate the risk, apply patches or take other remediation actions as required and notify customers, business partners, and suppliers when appropriate. All of this requires significant resources and time and attention from management and our employees.

As a result of any actual or perceived breach of network security that occurs in our network or in the network of a customer of our products, regardless of whether the breach is attributable to our products, the market perception of the effectiveness of our products and our overall reputation could be harmed. As a large, well known provider of networking products, cyber attackers may specifically target our products or attempt to imitate us or our products in order to compromise a network. Because the techniques used by attackers, many of whom are highly sophisticated and well-funded, to access or sabotage networks change frequently and generally are not recognized until after they are used, we may be unable to anticipate or immediately detect these techniques or the vulnerabilities they have caused. This could impede our sales, manufacturing, distribution or other critical functions, which could have an adverse impact on our financial results. The economic costs to us to eliminate or alleviate cyber or other security problems, bugs, viruses, worms, malicious software systems and security vulnerabilities could be significant and may be difficult to anticipate or measure, because the damage may differ based on the identity and motive of the attacker, which are often difficult to pinpoint. Additionally, we could be subject to regulatory investigations, potential fines and litigation in connection with a security breach or related issue and be liable to third parties for these types of breaches.

We rely on value-added and other resellers, as well as distribution partners, to sell our products, and disruptions to, or our failure to effectively develop and manage, our distribution channel and the processes and procedures that support it could adversely affect our ability to generate revenues from the sale of our products.

Our future success is highly dependent upon establishing and maintaining successful relationships with a variety of value-added and other reseller and distribution partners, including our worldwide strategic partners such as Ericsson, IBM, Dimension Data and NEC Corporation. The majority of our revenues are derived through value-added resellers and distributors, most of which also sell our competitors' products, and some of which sell their own competing products. Our revenues depend in part on the performance of these partners. The loss of or reduction in sales to our resellers or distributors could materially reduce our revenues. Our competitors may in some cases be effective in leveraging their market share positions or in providing incentives to current or potential resellers and distributors to favor their products or to prevent or reduce sales of our products. If we fail to develop and maintain relationships with our partners, fail to develop new relationships with value-added resellers and distributors in new markets, fail to expand the number of distributors and resellers in existing markets, fail to manage, train or motivate existing value-added resellers and distributors effectively, determine that we cannot continue to do business with these partners for any reason or if these partners are not successful in their sales efforts, sales of our products may decrease, and our business, financial condition, and results of operations would suffer.

In addition, we recognize a portion of our revenues at the time we sell products to our distributors. If these sales are made based on inaccurate or untimely information, the amount or timing of our revenues could be adversely impacted. Further, our distributors may increase orders during periods of product shortages, cancel orders if their inventory is too high, or delay orders in anticipation of new products. They also may adjust their orders in response to the supply of our products and the products of our competitors that are available to them, and in response to seasonal fluctuations in end-user demand.

We are also vulnerable to third parties who illegally distribute or sell counterfeit, stolen or unfit versions of our products, which has happened in the past and could happen in the future. Such sales could have a negative impact on our reputation and business.

Further, in order to develop and expand our distribution channel, we must continue to offer attractive channel programs to potential partners and scale and improve our processes and procedures that support the channel. As a result, our programs, processes and procedures may become increasingly complex and inherently difficult to manage. We have previously entered into OEM agreements with partners pursuant to which they rebrand and resell our products as part of their product portfolios. These types of relationships are complex and require additional processes and procedures that may be challenging and costly to implement, maintain and manage. Our failure to successfully manage and develop our distribution channel and the programs, processes and procedures that support it could adversely affect our ability to generate revenues from the sale of our products. We also depend on our global channel partners to comply with applicable legal and regulatory requirements. To the extent that they fail to do so, that could have a material adverse effect on our business, operating results, and financial condition.

Our ability to process orders and ship products in a timely manner is dependent in part on our business systems and performance of the systems and processes of third parties as well as the interfaces between our systems and the systems of such third parties. Dependence on outsourced information technology and other administrative functions may impair our ability to operate effectively.

Some of our business processes depend upon our IT systems, the systems and processes of third parties, and the interfaces between the two. For example, on December 31, 2018, we entered into a Master Services Agreement and certain Statements of Work with IBM pursuant to which we will outsource significant portions of our IT and other administrative functions following a transition period. These cloud providers, third party providers, and off-site facilities are vulnerable to damage, interruption, including performance problems from earthquakes, hurricanes, floods, fires, power loss, telecommunications failures, equipment failure, adverse events caused by operator error, cybersecurity attacks and similar events. In addition, because we lease off-site data center facilities, we cannot be assured that we will be able to expand our data center infrastructure to meet user demand in a timely manner, or on favorable economic terms. If we have issues receiving and processing data, this may delay our ability to provide products and services to our customers and business partners and damage our business. We also rely upon the performance of the systems and processes of our contract manufacturers to build and ship our products. If those systems and processes experience interruption or delay, our ability to build and ship our products in a timely manner may be harmed. Since IT is critical to our operations, any failure to perform on the part of our IT providers could impair our ability to operate effectively. In addition to the risks outlined above, problems with any of the third parties we rely on for our IT systems could result in liabilities to our customers and business partners, lower revenue and unexecuted efficiencies, and impact our results of operations and our stock price.

Integration of acquisitions could disrupt our business and harm our financial condition and stock price and may dilute the ownership of our stockholders.

We have made, and may continue to make, acquisitions in order to enhance our business. For example, we acquired Mist Systems in 2019, HTBase in 2018 and Cyphort in 2017. Acquisitions involve numerous risks, including, but not limited to, problems combining the purchased operations, technologies or products, unanticipated costs, liabilities, litigation, and diversion of management's attention from our core businesses, adverse effects on existing business relationships with suppliers and customers, risks associated with entering markets in which we have no or limited prior experience, and where competitors in such markets have stronger market positions, initial dependence on unfamiliar supply chains or relatively small supply partners, and the potential loss of key employees, customers, distributors, vendors and other business partners of the companies we acquire. There can be no assurance that we will be able to integrate successfully any businesses, products, technologies, or personnel that we might acquire. The integration of businesses that we may acquire is likely to be a complex, time-consuming, and expensive process and we may not realize the anticipated revenues or other benefits associated with our acquisitions. If we fail to successfully manage, operate or integrate any acquired business or if we are unable to efficiently operate as a combined organization, including through the use of common information and communication systems, operating procedures, financial controls, and human resources practices, our business, financial condition, and results of operations may be adversely affected.

In connection with certain acquisitions, we may agree to issue common stock, or assume equity awards, that dilute the ownership of our current stockholders, use a substantial portion of our cash resources, assume liabilities (both known and unknown), record goodwill and amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write-offs and restructuring and other related expenses, all of which could harm our financial condition and results of operations.

We are a party to lawsuits, investigations, proceedings, and other disputes, which are costly to defend and, if determined adversely to us, could require us to pay fines or damages, undertake remedial measures or prevent us from taking certain actions, any or all of which could harm our business, results of operations, financial condition or cash flows.

We, and certain of our current and former officers and current and former members of our Board of Directors, have been or are subject to various lawsuits. We have been served with lawsuits related to employment matters, commercial transactions and patent infringement, as well as securities laws. The U.S. Securities and Exchange Commission, or the SEC, is conducting, and the U.S. Department of Justice, or the DOJ, was previously conducting investigations into possible violations by the Company of the U.S. Foreign Corrupt Practices Act, or the FCPA, in a number of countries. The Company's Audit Committee, with the assistance of independent advisors, conducted a thorough internal review of possible violations of the FCPA, and the Company made improvements in its internal controls and carried out a number of disciplinary actions. The Company is continuing to fully cooperate with the SEC's ongoing investigation, and based on the recent communications with the Staff of the SEC, the Company believes it is likely that the Staff of the SEC will seek to bring an enforcement action against the Company. The Company believes it is probable that it could incur a loss and has established an estimated legal reserve of \$12.0 million related to the ongoing SEC investigation. Litigation and investigations are inherently uncertain. We therefore cannot predict the duration, scope, outcome or

consequences of litigation and government investigations. In connection with any government investigations, including those in which we are currently involved as described above, if the government takes action against us or we agree to settle the matter, we may be required to pay substantial fines and incur other sanctions, which may be material, and suffer reputational harm. The lawsuits and investigations are expensive and time-consuming to defend, settle, and/or resolve, and may require us to implement certain remedial measures that could prove costly or disruptive to our business and operations. The unfavorable resolution of one or more of these matters could have a material adverse effect on our business, results of operations, financial condition or cash flows.

We are a party to litigation and claims regarding intellectual property rights, resolution of which may be time-consuming and expensive, as well as require a significant amount of resources to prosecute, defend, or make our products non-infringing.

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. We expect that infringement claims may increase as the number of products and competitors in our market increases and overlaps occur. Third parties have asserted and may in the future assert claims or initiate litigation related to patent, copyright, trademark, and other intellectual property rights to technologies and related standards that are relevant to our products. The asserted claims and/or initiated litigation may include claims against us or our manufacturers, suppliers, partners, or customers, alleging that our products or services infringe proprietary rights. In addition, increased patent litigation brought by non-practicing entities in recent years may result, and in some cases has resulted, in our customers requesting or requiring us to absorb a portion of the costs of such litigation or providing broader indemnification for litigation, each of which could increase our expenses and negatively affect our business, financial condition and results of operations. Regardless of the merit of these claims, they have been and can be time-consuming, result in costly litigation, and may require us to develop non-infringing technologies, enter into license agreements, or cease engaging in certain activities or offering certain products or services. Furthermore, because of the potential for high awards of damages or injunctive relief that are not necessarily predictable, even arguably unmeritorious claims may be settled for significant amounts of money. If any infringement or other intellectual property claim made against us or anyone we are required to indemnify by any third-party is successful, if we are required to settle litigation for significant amounts of money, if we fail to develop non-infringing technology, if we incorporate infringing technology in our products or if we license required proprietary rights at material expense, our business, financial condition, and results of operations could be materially and adversely affected.

As we seek to sell more products to telecommunications, cable and cloud service provider companies and other large customers, we may be required to agree to terms and conditions that could have an adverse effect on our business or impact the amount of revenues to be recognized.

Telecommunications, cable and cloud service provider companies, which comprise a significant portion of our customer base, and other large companies, generally have greater purchasing power than smaller entities and, accordingly, often request and receive more favorable terms from suppliers. For example, our customers France Telecom-Orange and Deutsche Telekom AG have formed a company for the purpose of purchasing products from, and negotiating more favorable contractual terms with, suppliers. As we seek to sell more products to this class of customer, we may be required to agree to such terms and conditions, which may include terms that affect the timing of our ability to recognize revenue, increase our costs and have an adverse effect on our business, financial condition, and results of operations. Consolidation among such large customers can further increase their buying power and ability to require onerous terms.

In addition, service providers have purchased products from other vendors who promised but failed to deliver certain functionality and/or had products that caused problems or outages in the networks of these customers. As a result, these customers may request additional features from us and require substantial penalties for failure to deliver such features or may require substantial penalties for any network outages that may be caused by our products. These additional requests and penalties, if we are required to agree to them, may impact the amount of revenue recognition from such sales, which may negatively affect our business, financial condition and results of operations. In addition, increased patent litigation brought against customers by non-practicing entities in recent years, may result, and in some cases has resulted, in customers requesting or requiring vendors to absorb a portion of the costs of such litigation or providing broader indemnification for litigation, each of which could increase our expenses and negatively affect our business, financial condition and results of operations.

Regulation of our industry in general and the telecommunications industry in particular could harm our operating results and future prospects.

We are subject to laws and regulations affecting the sale of our products in a number of areas. For example, some governments have regulations prohibiting government entities from purchasing security products that do not meet country-specific safety, conformance or security certification criteria or in-country test requirements. Other regulations that may negatively impact our business include local content or local manufacturing requirements most commonly applicable for government, state-owned enterprise or regulated industry procurements. These types of regulations are in effect or under consideration in several jurisdictions where we do business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act includes disclosure requirements applicable to public companies regarding the use of “conflict minerals” mined from the Democratic Republic of Congo and adjoining countries, which we refer to collectively as the DRC, and procedures regarding a manufacturer's efforts to prevent the sourcing of such “conflict minerals.” These minerals are present in our products. In addition, the European Union reached agreement in late 2016 on an EU-wide conflict minerals rule under which most EU importers of tin, tungsten, tantalum, gold and their ores will have to conduct due diligence to ensure the minerals do not originate from conflict zones and do not fund armed conflicts. Large manufacturers also will have to disclose how they plan to monitor their sources to comply with the rules. The regulation was adopted in 2017 with compliance required by 2021.

In addition, environmental laws and regulations relevant to electronic equipment manufacturing or operations, including laws and regulations governing the hazardous material content of our products and laws relating to the collection of and recycling of electrical and electronic equipment, may adversely impact our business and financial condition. These laws and regulations include, among others, the European Union, or EU, Restriction on the Use of Certain Hazardous Substances Directive, or RoHS. The EU RoHS and the similar laws of other jurisdictions limit the content of certain hazardous materials, such as lead, mercury, and cadmium, in electronic equipment, including our products. Currently, our products comply with the EU RoHS requirements. However, certain exemptions are scheduled to lapse. The lapse of any exemption, further changes to this or other laws, or passage of similar laws in the EU or other jurisdictions, would require us to cease selling non-compliant products and to reengineer our products to use components compatible with these regulations. This reengineering and component substitution could result in additional costs to us, disrupt our operations or logistics, and result in an adverse impact on our operating results. In addition, in validating the compliance of our products with applicable hazardous materials restrictions, we rely substantially on affirmations by our component suppliers as to the compliance of their products with respect to those same restrictions. Failure by our component suppliers to furnish accurate and timely information could subject us to penalties or liability for violation of such hazardous materials restrictions, interrupt our supply of products to the EU, and result in our customers refusing or being unable to purchase our products. Additionally, the EU and a number of other jurisdictions have adopted regulations requiring producers of electrical and electronic equipment to assume certain responsibilities for collecting, treating, recycling and disposing of products when they have reached the end of their useful life. Finally, the EU REACH regulations regulate the handling of certain chemical substances that may be used in our products.

In addition, as a contractor and subcontractor to U.S. government departments and agencies, we are subject to federal regulations pertaining to our IT systems. For instance, as a subcontractor to the U.S. Department of Defense, or DOD, the Defense Federal Acquisition Regulation Supplement, or DFARS, required that our IT systems comply with the security and privacy controls described in National Institute of Standards and Technology Special Publication 800-171, or NIST SP 800-171. The DFARS also requires that we flow the security control requirement down to certain of our own subcontractors. Failure to comply with these requirements could result in a loss of federal government business, subject us to claims or other remedies for non-compliance and negatively impact our business, financial condition, and results of operations.

The telecommunications industry is highly regulated, and our business and financial condition could be adversely affected by changes in regulations relating to the Internet telecommunications industry. Similarly, while there are currently few laws or regulations that apply directly to access to or commerce on IP networks, future regulations could include sales taxes on products sold via the Internet and Internet service provider access charges. We could be adversely affected by regulation of IP networks and commerce in any country where we market equipment and services to service providers or cloud provider companies. Regulations governing the range of services and business models that can be offered by service providers or cloud provider companies could adversely affect those customers' needs for products. For instance, in December 2017, the U.S. Federal Communications Commission repealed its 2015 regulations governing aspects of fixed broadband networks and wireless networks. This change in regulatory treatment of networks might impact service provider and cloud provider business models and their need for Internet telecommunications equipment and services. At the same time, several states have enacted their own laws and regulations governing certain aspects of fixed and wireless networks in the manner of the 2015 FCC regulations. These laws and regulations enacted by the states are or will be subject to legal challenges from the federal government and/or regulated providers. Also, many

jurisdictions are evaluating or implementing regulations relating to cyber security, supply chain integrity, privacy and data protection, any of which can affect the market and requirements for networking and security equipment.

The adoption and implementation of additional regulations could reduce demand for our products, increase the cost of building and selling our products, result in product inventory write-offs, impact our ability to ship products into affected areas and recognize revenue in a timely manner, require us to spend significant time and expense to comply, and subject us to fines and civil or criminal sanctions or claims if we were to violate or become liable under such regulations. Any of these impacts could have a material adverse effect on our business, financial condition, and results of operations.

Governmental regulations and economic sanctions affecting the import or export of products generally or affecting products containing encryption capabilities, in particular, could negatively affect our revenues and operating results.

The United States and various foreign governments have imposed controls and restrictions on the export of, among other things, products that contain or use encryption technology. Most of our products contain or use encryption technology and, consequently, are subject to such controls, requirements and restrictions. Certain governments, like those of Russia and China, control importation and in-country use of encryption items and technology. The scope, nature and severity of such controls vary widely across different countries and may change frequently over time.

Increasingly, governments have begun using export and import controls not only to further national security objectives but also to protect local industries and restrict proliferation of locally developed “emerging or foundational technology.” For example, in 2018 the U.S. enacted the Export Control Reform Act, which expands the power of the Commerce Department to use export controls to protect domestic industry and to restrict the export of emerging and foundational technologies not currently subject to controls. In furtherance of that law, on November 19, 2018, the United States Department of Commerce sought public comment on how to define emerging technologies. Our ability to market and sell our products overseas may be impacted by such export controls.

In addition, the U.S. and other governments have especially broad sanctions and embargoes prohibiting provision of goods or services to certain countries, and territories, and to certain sanctioned governments, legal entities and individuals. Some of these restrictions have been imposed not just to protect national security but also to protect domestic industries and to achieve political aims. For instance, the U.S. Department of Commerce in 2018 added to its Entity List a Chinese semiconductor manufacturer on the express basis that it threatens the viability of U.S. competitors; the Entity List traditionally is used to restrict exports to end users that pose a security risk. Particularly far reaching and complex are restrictions imposed by the U.S. and EU on exports to Russia and, in particular, to the disputed region of Crimea. We have implemented systems to detect and prevent sales into these restricted countries or to prohibited entities or individuals, but there can be no assurance that our third party, downstream resellers and distributors will abide by these restrictions or have processes in place to ensure compliance, especially where local government regulation might prohibit adherence to such restrictions.

Certain governments also impose special local content, certification, testing, source code review, escrow and governmental recovery of private encryption keys, or other cybersecurity feature requirements to protect network equipment and software procured by or for the government. Similar requirements also may be imposed in procurements by state owned entities (“SOE’s”) or even private companies forming part of “critical network infrastructure” or supporting sensitive industries. For example, China, Vietnam and India have promulgated cybersecurity regulations affecting networking products that may impair our ability to profitably market and sell our products there. China, in particular, is expected to require implementation of non-standard Chinese encryption algorithms in products sold into certain government, SOE, critical infrastructure and sensitive industry (such as financial institutions) markets. In the U.S., there are new restrictions on the use of certain Chinese-origin components or systems either (1) in items sold to the U.S. government or (2) in the internal networks of government contractors and subcontractors (even if those networks are not used for government-related projects). The U.S. government also might restrict or ban the use of certain Chinese-origin components and systems in next generation mobile communications networks (e.g. 5G).

In addition, governments sometimes impose additional taxes on certain imported products. For example, the United States and Chinese governments each have imposed tariffs on certain products originating from the other country. In 2018, the United States imposed tariffs on a large variety of products of China origin. As a result, beginning September 24, 2018, a large portion of Juniper products manufactured in China became subject to a 10% tariff on importation into the U.S. While the United States government postponed a planned rate increase to 25% while bilateral trade negotiations were on-going, the U.S. President announced on May 5, 2019, that the 25% rate would go into effect on May 10, 2019 due to the lack of negotiation progress. In July 2019, the U.S. President reiterated his readiness to impose 25% tariffs on all remaining Chinese imports if negotiations are not successful and on August 1, 2019, he announced that he would impose a 10% tariff on all remaining Chinese imports effective September 1, 2019 during the ongoing negotiations; such action could subject certain components of Juniper products to tariff on importation into

the U.S. Depending upon its duration and implementation, as well as our ability to mitigate their impact, these tariffs could materially affect our business, including in the form of increased cost of goods sold, increased pricing for customers, and reduced sales.

On May 30, 2019, the U.S. President announced his intention to impose a tariff on imports from Mexico effective June 10, 2019. The tariff rate was to start at 5% and gradually increase to 25% over the course of several months unless and until Mexico took steps to reduce the number of migrant crossings over the US-Mexico border. While the President subsequently announced a delay of the tariff, he left open the possibility that the United States could impose a tariff in the near future. As the President never issued an order imposing the tariff, its exact scope was not known. Juniper does obtain products having Mexico as their country-of-origin, so it is possible that we would be subject to any such tariff. Should the United States impose the tariff, we will determine its impact on our operations and conditions.

Governmental regulation of encryption or IP networking technology and regulation of imports or exports, or our failure to obtain required import or export approval for our products, or related economic sanctions could harm our international and domestic sales and adversely affect our revenues and operating results. In addition, failure to comply with such regulations could result in harm to our reputation and ability to compete in international markets, penalties, costs, seizure of assets (including source code) and restrictions on import or export privileges or adversely affect sales to government agencies or government-funded projects.

Our actual or perceived failure to adequately protect personal data could adversely affect our business, financial condition and results of operations.

A wide variety of provincial, state, national, foreign, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer, and other processing of personal data. These privacy- and data protection-related laws and regulations are evolving, with new or modified laws and regulations proposed and implemented frequently and existing laws and regulations subject to new or different interpretations. Further, our legal and regulatory obligations in foreign jurisdictions are subject to unexpected changes, including the potential for regulatory or other governmental entities to enact new or additional laws or regulations, to issues rulings that invalidate prior laws or regulations, or to increase penalties significantly. Compliance with these laws and regulations can be costly and can delay or impede the development and offering of new products and services.

For example, the General Data Protection Regulation (“GDPR”), which became effective in May 2018, imposes more stringent data protection requirements, and provides for significantly greater penalties for noncompliance, than the EU laws that previously applied. Additionally, California recently enacted legislation, the California Consumer Privacy Act (“CCPA”), which will become effective January 1, 2020. The CCPA will, among other requirements, require covered companies to provide new disclosures to California consumers, and allow such consumers new abilities to opt-out of certain sales of personal information. Legislators have stated that they intend to propose amendments to the CCPA before the effective date. It remains unclear the extent or timing of any modifications that will be made to the CCPA, or how such modifications will be interpreted. The effects of the CCPA potentially are significant and may require us to modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply. We may also be subject to additional obligations relating to personal data by contract that industry standards apply to our practices. Our actual or perceived failure to comply with applicable laws and regulations or other obligations to which we may be subject relating to personal data, or to protect personal data from unauthorized access, use, or other processing, could result in enforcement actions and regulatory investigations against us, claims for damages by customers and other affected individuals, fines, damage to our reputation, and loss of goodwill, any of which could have a material adverse effect on our operations, financial performance, and business. Further, evolving and changing definitions of personal data and personal information, within the EU, the U.S., U.K., and elsewhere, including the classification of IP addresses, machine identification information, location data, and other information, may limit or inhibit our ability to operate or expand our business, including limiting business relationships and partnerships that may involve the sharing or uses of data, and may require significant costs, resources, and efforts in order to comply.

Our ability to develop, market, and sell products could be harmed if we are unable to retain or hire key personnel.

Our future success depends upon our ability to recruit and retain the services of executive, engineering, sales and marketing, and support personnel. The supply of highly qualified individuals, in particular engineers in very specialized technical areas, or sales people with specialized industry expertise, is limited and competition for such individuals is intense. None of our officers or key employees is bound by an employment agreement for any specific term. The loss of the services of any of our key employees, the inability to attract or retain personnel in the future or delays in hiring required personnel, engineers and sales people, and the complexity and time involved in replacing or training new employees, could delay the development and introduction of new products, and negatively impact our ability to market, sell, or support our products.

A number of our team members are foreign nationals who rely on visas and entry permits in order to legally work in the United

States and other countries. In recent years, the United States has increased the level of scrutiny in granting H-1(B), L-1 and other business visas. In addition, the current U.S. administration has made immigration reform a priority. Compliance with United States immigration and labor laws could require us to incur additional unexpected labor costs and expenses or could restrain our ability to retain skilled professionals. Any of these restrictions could have a material adverse effect on our business, results of operations and financial conditions.

Our financial condition and results of operations could suffer if there is an impairment of goodwill or other intangible assets with indefinite lives.

We are required to test intangible assets with indefinite lives, including goodwill, annually or more frequently if certain circumstances change that would more likely than not reduce the fair value of a reporting unit and intangible assets below their carrying values. As of June 30, 2019, our goodwill was \$3,338.3 million and our intangible assets with indefinite lives was \$49.0 million. When the carrying value of a reporting unit's goodwill exceeds its implied fair value of goodwill, or if the carrying amount of an intangible asset with an indefinite life exceeds its fair value, a charge to operations is recorded. Either event would result in incremental expenses for that quarter, which would reduce any earnings or increase any loss for the period in which the impairment was determined to have occurred. We have in the past recorded goodwill impairment charges. Declines in our level of revenues or declines in our operating margins, or sustained declines in our stock price, increase the risk that goodwill and intangible assets with indefinite lives may become impaired in future periods.

Our goodwill impairment analysis is sensitive to changes in key assumptions used in our analysis, such as expected future cash flows, the degree of volatility in equity and debt markets, and our stock price. If the assumptions used in our analysis are not realized, it is possible that an impairment charge may need to be recorded in the future. We cannot accurately predict the amount and timing of any impairment of goodwill or other intangible assets. However, any such impairment would have an adverse effect on our results of operations.

Changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our results.

Our future effective tax rates could be subject to volatility or adversely affected by the following: earnings being lower than anticipated in countries where we have lower statutory rates and higher than anticipated earnings in countries where we have higher statutory rates; changes in the valuation of our deferred tax assets and liabilities; expiration of, or lapses in, the R&D tax credit laws applicable to us; transfer pricing adjustments related to certain acquisitions, including the license of acquired intangibles under our intercompany R&D cost sharing arrangement; costs related to intercompany restructuring; tax effects of share-based compensation; challenges to our methodologies for valuing developed technology or intercompany arrangements; limitations on the deductibility of net interest expense; or changes in tax laws, regulations, accounting principles, or interpretations thereof. For example, on July 24, 2018, the Ninth Circuit Court of Appeals, or the Court, issued an opinion in *Altera Corp. v. Commissioner* requiring related parties in an intercompany cost-sharing arrangement to share expenses related to share-based compensation. On August 7, 2018, the Court withdrew its opinion to allow time for a reconstituted panel to confer. On June 7, 2019, the Court upheld the cost-sharing regulations. On July 22, 2019, Altera petitioned the Court for a rehearing. Pending final resolution of the Altera case, the Company's position on cost-sharing of share-based compensation remains unchanged. If the final judicial decision is not in favor of Altera, we expect our effective tax rate and current income tax payable to be higher. We are monitoring this case and any impact the final resolution may have on our financial statements. In addition, the Tax Cuts and Jobs Act of 2017 (the "Tax Act"), which was signed into law on December 22, 2017, made significant changes to the taxation of U.S. business entities that may have a meaningful impact to our provision for income taxes. These changes included a reduction to the federal corporate income tax rate, the current taxation of certain foreign earnings, the imposition of base-erosion prevention measures which may limit the deduction of certain transfer pricing payments, and possible limitations on the deductibility of net interest expense or corporate debt obligations. Accounting for the income tax effects of the Tax Act required significant judgments and estimates that are based on current interpretations of the Tax Act. The U.S. Department of the Treasury continues to issue regulations that affect various components of the Act. Our future effective tax rate may be impacted by changes in interpretation of the regulations, as well as additional legislation and guidance regarding the Act.

Furthermore, on October 5, 2015, the Organisation for Economic Co-operation and Development, or OECD, an international association of 35 countries including the U.S., published final proposals under its Base Erosion and Profit Shifting, or BEPS, Action Plan. The BEPS Action Plan includes fifteen Actions to address BEPS in a comprehensive manner and represents a significant change to the international corporate tax landscape. These proposals, as adopted by countries, may increase tax uncertainty and adversely affect our provision for income taxes. In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Service, or IRS, and other tax authorities. It is possible that tax authorities may disagree with certain positions we have taken and any adverse outcome of such a review or audit could have a negative effect on our financial position.

and operating results. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes, but the determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment by management, and there are transactions where the ultimate tax determination is uncertain. Although we believe that our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made. There can be no assurance that the outcomes from continuous examinations will not have an adverse effect on our business, financial condition, and results of operations.

We may face difficulties enforcing our proprietary rights, which could adversely affect our ability to compete.

We generally rely on a combination of patents, copyrights, trademarks, and trade secret laws and contractual restrictions on disclosure of confidential and proprietary information, to establish and maintain proprietary rights in our technology and products. Although we have been issued numerous patents and other patent applications are currently pending, there can be no assurance that any of our patent applications will result in issued patents or that any of our patents or other proprietary rights will not be challenged, invalidated, infringed or circumvented or that our rights will, in fact, provide competitive advantages to us or protect our technology, any of which could result in costly product redesign efforts, discontinuance of certain product offerings and other competitive harm.

In addition, despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or obtain and use information that we regard as proprietary. We generally enter into confidentiality or license agreements with our employees, consultants, vendors, and customers, and generally limit access to and distribution of our proprietary information. However, we cannot assure you that we have entered into such agreements with all parties who may have or have had access to our confidential information or that the agreements we have entered into will not be breached. We cannot guarantee that any of the measures we have taken will prevent misappropriation of our technology.

Furthermore, the laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. The outcome of any actions taken in these foreign countries may be different than if such actions were determined under the laws of the United States. Although we are not dependent on any individual patents or group of patents for particular segments of the business for which we compete, if we are unable to protect our proprietary rights in a market, we may find ourselves at a competitive disadvantage to others who need not incur the substantial expense, time, and effort required to create innovative products that have enabled our success.

We are subject to risks arising from our international operations, which may adversely affect our business, financial condition, and results of operations.

We derive a substantial portion of our revenues from our international operations, and we plan to continue expanding our business in international markets. We conduct significant sales and customer support operations directly and indirectly through our distributors and value-added resellers in countries throughout the world and depend on the operations of our contract manufacturers and suppliers that are located outside of the United States. In addition, a portion of our R&D and our general and administrative operations are conducted outside the United States. In some countries, we may experience reduced intellectual property protection.

As a result of our international operations, we are affected by economic, business regulatory, social, and political conditions in foreign countries, including the following:

- changes in general IT spending,
- the imposition of government controls, inclusive of critical infrastructure protection;
- changes or limitations in trade protection laws or other regulatory requirements, which may affect our ability to import or export our products from various countries;
- laws that restrict sales of products developed or manufactured outside of the country;
- varying and potentially conflicting laws and regulations;
- fluctuations in local economies;
- wage inflation or a tightening of the labor market;

- tax policies that could have a business impact;
- import tariffs imposed by the United States and reciprocal tariffs imposed by foreign countries;
- data privacy rules and other regulations that affect cross border data flow; and
- the impact of the following on customer spending patterns: political considerations, unfavorable changes in tax treaties or laws, natural disasters, epidemic disease, labor unrest, earnings expatriation restrictions, misappropriation of intellectual property, military actions, acts of terrorism, political and social unrest and difficulties in staffing and managing international operations.

Any or all of these factors could have a material adverse impact on our business, financial condition, and results of operations.

In addition, the U.K.'s exit from the EU, commonly referred to as Brexit, has caused, and may continue to cause, uncertainty in the global markets. Brexit, if implemented, will take some period of time to complete and could result in regulatory changes that impact our business. For example, changes to the way service providers conduct business and transmit data between the U.K. and the EU could require us to make changes to the way we handle customer data. We will also review the impact of any resulting changes to EU or U.K. law that could affect our operations, such as labor policies, financial planning, product manufacturing, and product distribution. Political and regulatory responses to the vote are still developing and we are in the process of assessing the impact the vote may have on our business as more information becomes available. Nevertheless, because we conduct business in the EU, including the U.K., any of the effects of Brexit, including those we cannot anticipate, could have a material adverse effect on our business, operating results, financial condition and cash flows.

There remains significant risk that the U.K. will exit from the EU without agreement between the EU and U.K. on terms addressing customs and trade matters. The U.K.'s new Prime Minister has indicated that the U.K. must prepare for a no-deal Brexit. If it occurs, this "Hard Brexit" scenario would mean, among other things, that U.K. Customs would have to clear a far greater daily volume of imports than it has ever had to before. If U.K. Customs is not able to handle such increased volume, significant delays in imports may very well result, thereby potentially producing a short-term material adverse effect on our business. Hard Brexit could result in further short-term uncertainty and currency volatility. Additional currency volatility could drive a weaker British pound, which increases the cost of goods imported into our U.K. operations and may decrease the profitability of our U.K. operations. A weaker British pound versus the U.S. dollar also causes local currency results of our U.K. operations to be translated into fewer U.S. dollars during a reporting period. Any adjustments we make to our business and operations as a result of Brexit could result in significant time and expense to complete.

Our business is also impacted by the negotiation and implementation of free trade agreements between the United States and other nations. Such agreements can reduce barriers to international trade and thus the cost of conducting business overseas. For instance, the United States recently reached a new trilateral trade agreement with the Governments of Canada and Mexico to replace the North American Free Trade Agreement (NAFTA). If the United States either withdraws from NAFTA or fails to ratify the new agreement, known as the United States-Mexico-Canada Agreement (U.S.MCA), our cost of doing business within the three countries could increase.

Moreover, local laws and customs in many countries differ significantly from or conflict with those in the United States or in other countries in which we operate. In many foreign countries, it is common for others to engage in business practices that are prohibited by our internal policies and procedures or U.S. regulations applicable to us. There can be no assurance that our employees, contractors, channel partners, and agents will not take actions in violation of our policies and procedures, which are designed to ensure compliance with U.S. and foreign laws and policies. Violations of laws or key control policies by our employees, contractors, channel partners, or agents could result in termination of our relationship, financial reporting problems, fines, and/or penalties for us, or prohibition on the importation or exportation of our products, and could have a material adverse effect on our business, financial condition and results of operations.

Our products are highly technical and if they contain undetected defects, errors or malware or do not meet customer quality expectations, our business could be adversely affected, and we may be subject to additional costs or lawsuits or be required to pay damages in connection with any alleged or actual failure of our products and services.

Our products are highly technical and complex, are critical to the operation of many networks, and, in the case of our security products, provide and monitor network security and may protect valuable information. Our products have contained and may contain one or more undetected errors, defects, malware, or security vulnerabilities. These errors may arise from hardware or

software we produce or procure from third parties. Some errors in our products may only be discovered after a product has been installed and used by end-customers.

Any errors, defects, malware or security vulnerabilities discovered in our products after commercial release could result in monetary penalties, negative publicity, loss of revenues or delay in revenue recognition, loss of customers, loss of future business and reputation, penalties, and increased service and warranty cost, any of which could adversely affect our business, financial condition, and results of operations. In addition, in the event an error, defect, malware, or vulnerability is attributable to a component supplied by a third-party vendor, we may not be able to recover from the vendor all of the costs of remediation that we may incur. In addition, we could face claims for product liability, tort, or breach of warranty or indemnification. Defending a lawsuit, regardless of its merit, is costly and may divert management's attention. If our business liability insurance coverage is inadequate, or future coverage is unavailable on acceptable terms or at all, our financial condition and results of operations could be harmed. Moreover, if our products fail to satisfy our customers' quality expectations for whatever reason, the perception of and the demand for our products could be adversely affected.

We are exposed to fluctuations in currency exchange rates, which could negatively affect our financial condition and results of operations.

Because a substantial portion of our business is conducted outside the United States, we face exposure to adverse movements in non-U.S. currency exchange rates. These exposures may change over time as business practices evolve and could have a material adverse impact on our financial condition and results of operations.

The majority of our revenues and expenses are transacted in U.S. Dollars. We also have some transactions that are denominated in foreign currencies, primarily the British Pound, Chinese Yuan, Euro, and Indian Rupee related to our sales and service operations outside of the United States. An increase in the value of the U.S. Dollar could increase the real cost to our customers of our products in those markets outside the United States in which we sell in U.S. Dollars. This could negatively affect our ability to meet our customers' pricing expectations in those markets and may result in erosion of gross margin and market share. A weakened U.S. Dollar could increase the cost of local operating expenses and procurement of raw materials to the extent we must purchase components in foreign currencies.

Currently, we hedge currency exposures associated with certain assets and liabilities denominated in nonfunctional currencies and periodically hedge anticipated foreign currency cash flows, with the aim of offsetting the impact of currency fluctuations on these exposures. However, hedge activities can be costly, and hedging cannot fully offset all risks, including long-term declines or appreciation in the value of the U.S. Dollar. If our attempts to hedge against these risks are not successful, or if long-term declines or appreciation in the value of the U.S. Dollar persist, our financial condition and results of operations could be adversely impacted.

If we fail to adequately evolve our financial and managerial control and reporting systems and processes, our ability to manage and grow our business will be negatively affected.

Our ability to successfully offer our products and implement our business plan in a rapidly evolving market requires an effective planning, forecasting, and management process to enable us to effectively scale and adjust our business and business models in response to fluctuating market opportunities and conditions. We will need to continue to improve our financial and managerial control and our reporting systems and procedures in order to manage our business effectively in the future. If we fail to effectively improve our systems and processes or we fail to monitor and ensure that these systems and processes are being used correctly, our ability to manage our business, financial condition, and results of operations may be negatively affected.

If our products do not interoperate with our customers' networks, installations will be delayed or cancelled and could harm our business.

Our products are designed to interface with our customers' existing networks, each of which have different specifications and utilize multiple protocol standards and products from other vendors. Many of our customers' networks contain multiple generations of products that have been added over time as these networks have grown and evolved. Our products must interoperate with many or all of the products within these networks as well as future products in order to meet our customers' requirements. If we find errors in the existing software or defects in the hardware used in our customers' networks, we may need to modify our software or hardware to fix or overcome these errors so that our products will interoperate and scale with the existing software and hardware, which could be costly and could negatively affect our business, financial condition, and results of operations. In addition, if our products do not interoperate with those of our customers' networks, demand for our products could be adversely affected or orders for our products could be cancelled. This could hurt our operating results, damage our reputation, and seriously harm our business and prospects.

Our products incorporate and rely upon licensed third-party technology, and if licenses of third-party technology do not continue to be available to us or are not available on terms acceptable to us, our revenues and ability to develop and introduce new products could be adversely affected.

We integrate licensed third-party technology into certain of our products. From time to time, we may be required to renegotiate our current third-party licenses or license additional technology from third-parties to develop new products or product enhancements or to facilitate new business models. Third-party licenses may not be available or continue to be available to us on commercially reasonable terms. The failure to comply with the terms of any license, including free open source software, may result in our inability to continue to use such license. Some of our agreements with our licensors may be terminated for convenience by them. In addition, we cannot be certain that our licensors are not infringing the intellectual property rights of third parties or that our licensors have sufficient rights to the licensed intellectual property in all jurisdictions in which we may sell our products. Third-party technology we incorporate into our products that is deemed to infringe on the intellectual property of others may result, and in some cases has resulted, in limitations on our ability to source technology from those third parties, restrictions on our ability to sell products that incorporate the infringing technology, increased exposure to liability that we will be held responsible for incorporating the infringing technology in our products and increased costs involved in removing that technology from our products or developing substitute technology. Our inability to maintain or re-license any third-party licenses required in our products or our inability to obtain third-party licenses necessary to develop new products and product enhancements, could require us, if possible, to develop substitute technology or obtain substitute technology of lower quality or performance standards or at a greater cost, any of which could delay or prevent product shipment and harm our business, financial condition, and results of operations.

We rely on the availability and performance of information technology services provided by third parties, including IBM which will manage a significant portion of our systems.

Under the terms of our recent Master Services Agreement and certain Statements of Work, following a transition period, IBM will provide us with a broad range of information technology services, such as applications, including support, development and maintenance; infrastructure management and support, including for servers storage and network devices; and end user support including service desk. We expect that our businesses will become dependent on the services provided and systems operated for us by IBM and its third-party providers. The failure of one or more of these entities to meet our performance standards and expectations, including with respect to data security, may have a material adverse effect on our business, results of operations or financial condition.

Our success is dependent on our ability to maintain effective relationships with IBM and other third-party technology and service providers as well as the ability of IBM and any other third-party providers to perform as expected. We may terminate our agreement with IBM and any and all Statements of Work at any time on short notice for cause, convenience, certain specific performance failures, a breach of warranties by IBM, failure to transition, failure to transform, changes in law, force majeure, or a change in the control of either IBM or us. Depending on the type and timing of a termination, we may be required to pay certain termination amounts to IBM. IBM's only right to terminate the agreement is based on our failure to comply with certain terms applying to disputed payments.

Our ability to realize the expected benefits of this arrangement is subject to various risks, some of which are not within our control. These risks include, but are not limited to, disruption in services and the failure to protect the security and integrity of our data under the terms of the agreement. We are unable to provide assurances that some or all of these risks will not occur. Failure to effectively mitigate these risks, if they occur, could have a material adverse effect on our operations and financial results. In addition, we could face significant additional costs or business disruption if our arrangement with IBM is terminated or impaired and we cannot find alternative IT services or support on commercially reasonable terms or on a timely basis or if we are unable to hire new employees in order to return these services in-house.

We are required to evaluate the effectiveness of our internal control over financial reporting and publicly disclose material weaknesses in our controls. Any adverse results from such evaluation may adversely affect investor perception, and our stock price.

Section 404 of the Sarbanes-Oxley Act of 2002 requires our management to assess the effectiveness of our internal control over financial reporting and to disclose in our filing if such controls were unable to provide assurance that a material error would be prevented or detected in a timely manner. We have an ongoing program to review the design of our internal controls framework in keeping with changes in business needs, implement necessary changes to our controls design and test the system and process controls necessary to comply with these requirements. If in the future, our internal controls over financial reporting are determined to be not effective resulting in a material weakness or significant deficiency, investor perceptions regarding the reliability of our

financial statements may be adversely affected which could cause a decline in the market price of our stock and otherwise negatively affect our liquidity and financial condition.

Failure to maintain our credit ratings could adversely affect our cost of funds and related margins, liquidity, competitive position and access to capital markets.

The major credit rating agencies routinely evaluate our indebtedness. This evaluation is based on a number of factors, which include financial strength as well as transparency with rating agencies and timeliness of financial reporting. There can be no assurance that we will be able to maintain our credit ratings and failure to do so could adversely affect our cost of funds and related margins, liquidity, competitive position and access to capital markets.

We may be unable to generate the cash flow to satisfy our expenses, make anticipated capital expenditures or service our debt obligations, including the Notes and the Revolving Credit Facility.

As of June 30, 2019, we have issued \$1,800.0 million in aggregate principal amount of senior notes, which we refer to collectively as the Notes, and had \$1,790.0 million in total outstanding debt. In April 2019, we entered into a new credit agreement with certain institutional lenders that provides for a five-year \$500.0 million unsecured revolving credit facility, which we refer to as the Revolving Credit Facility, with an option to increase the Revolving Credit Facility by up to an additional \$200.0 million, subject to the lenders' approval. The credit agreement will terminate in April 2024, at which point all amounts borrowed must be repaid (subject to two one-year maturity extension options). As of June 30, 2019, no amounts were outstanding under the Revolving Credit Facility.

We may not be able to generate sufficient cash flow to enable us to satisfy our expenses, make anticipated capital expenditures or service our indebtedness, including the Notes and the Revolving Credit Facility (if drawn upon). Our ability to pay our expenses, satisfy our debt obligations, refinance our debt obligations and fund planned capital expenditures will depend on our future performance, which will be affected by general economic, financial, competitive, legislative, regulatory and other factors beyond our control. Based upon current levels of operations, we believe cash flow from operations and available cash will be adequate for at least the next twelve months to meet our anticipated requirements for working capital, capital expenditures and scheduled payments of principal and interest on our indebtedness, including the Notes and the Revolving Credit Facility (if drawn upon). However, if we are unable to generate sufficient cash flow from operations or to borrow sufficient funds in the future to service our debt, we may be required to sell assets, reduce capital expenditures, refinance all or a portion of our existing debt (including the Notes) or obtain additional financing. There is no assurance that we will be able to refinance our debt, sell assets or borrow more money on terms acceptable to us, or at all.

The indentures that govern the Notes contain various covenants that limit our ability and the ability of our subsidiaries to, among other things:

- incur liens;
- incur sale and leaseback transactions; and
- consolidate or merge with or into, or sell substantially all of our assets to, another person.

The Credit Agreement contains two financial covenants along with customary affirmative and negative covenants that include the following:

- maintenance of a leverage ratio no greater than 3.0x (provided that if a material acquisition has been consummated, we are permitted to maintain a leverage ratio no greater than 3.5x for up to four quarters) and an interest coverage ratio no less than 3.0x
- covenants that limit or restrict the ability of the Company and its subsidiaries to, among other things, grant liens, merge or consolidate, dispose of all or substantially all of its assets, change their accounting or reporting policies, change their business and incur subsidiary indebtedness, in each case subject to customary exceptions for a credit facility of this size and type.

As a result of these covenants, we are limited in the manner in which we can conduct our business, and we may be unable to engage in favorable business activities or finance future operations or capital needs. Accordingly, these restrictions may limit our ability to successfully operate our business. A failure to comply with these restrictions could lead to an event of default, which could

result in an acceleration of the indebtedness, which could result in an event of default under our other debt instruments. Our future operating results may not be sufficient to enable compliance with these covenants to remedy any such default. In addition, in the event of an acceleration, we may not have or be able to obtain sufficient funds to make any accelerated payments, including those under the Notes, and the Revolving Credit Facility (if drawn upon).

In addition, certain changes under the Tax Act may result in limitations on the deductibility of our net business interest expenses. The Tax Act generally limits the annual deduction for net business interest expense to an amount equal to 30% of adjusted taxable income. As a result, if our taxable income were to decline, we may not be able to fully deduct our net interest expense. These changes, among others under the Tax Act, could result in increases to our future U.S. tax expenses, which could have a material impact on our business.

A portion of the transaction consideration we received from the divestiture of our Junos Pulse product portfolio is in the form of a non-contingent seller promissory note and we may not receive the amount owed to us (including accrued interest), including in the time frame contemplated, by the buyer under the note.

In the fourth quarter of fiscal 2014, we completed the sale of our Junos Pulse product portfolio to an affiliate of Siris Capital, a private equity firm, for total consideration of \$230.7 million, of which \$125.0 million was in the form of an 18-month non-contingent interest-bearing promissory note issued to the Company. On May 1, 2017, we received a principal payment in the amount of \$75.0 million and outstanding interest on the note, and we and the issuer agreed to further amend the terms of the note with respect to the remaining approximately \$58.0 million to, among other things, extend the maturity date from December 31, 2018 to September 30, 2022, provided that interest due can be paid in kind by increasing the outstanding principal amount of the note and subordinate the note to other debt issued by senior lenders. Since a portion of the transaction consideration is in the form of a non-contingent seller promissory note and the note is subordinated to debt issued by senior lenders, there is the risk that we may not receive the amount owed to us (including accrued interest), including in the time frame contemplated, under the note. In the event that the promissory note is not repaid on the terms we contemplate, any collection or restructuring efforts we undertake may be costly and require significant time and attention from our management and there is no guarantee that we will be able to recover the amounts owed to us in full.

Our failure to pay quarterly dividends to our stockholders or the failure to meet our commitments to return capital to our stockholders could have a material adverse effect on our stock price.

Our ability to pay quarterly dividends or achieve our intended capital return policy will be subject to, among other things, our financial position and results of operations, available cash and cash flow, capital and debt service requirements, use of cash for acquisitions and other factors. Any failure to pay or increase future dividends as announced, or a reduction or discontinuation of quarterly dividends could have a material adverse effect on our stock price.

In November 2018, we announced that for 2019, we intend to target a capital return policy, inclusive of share repurchases and dividends, of approximately 75% of annual free cash flow. Free cash flow is calculated as net cash provided by operating activities less capital expenditures. In January 2018, we announced that our Board of Directors approved a new \$2.0 billion buyback authorization, which replaced our prior authorization. In January 2019, our Board of Directors declared an increase to our quarterly cash dividend to \$0.19 per share. In April 2019, as a part of our buyback authorization, we entered into a \$300.0 million accelerated share repurchase program, or ASR, which will be completed in the third quarter of 2019, of which \$240.0 million was for the initial repurchase and \$60.0 million is a forward contract. Any failure to meet our commitments to return capital to our stockholders could have a material adverse effect on our stock price.

The investment of our cash balance and our investments in government and corporate debt securities and equity securities are subject to risks, which may cause losses and affect the liquidity of these investments.

At June 30, 2019, we had \$1,381.3 million in cash and cash equivalents and \$1,493.7 million in short-and long-term investments. We have invested these amounts primarily in asset-backed securities, certificates of deposit, commercial paper, corporate debt securities, foreign government debt securities, money market funds, mutual funds, time deposits, U.S. government agency securities, and U.S. government securities. We also have \$93.4 million in other long-term assets for our investments in privately-held companies. Certain of our investments are subject to general credit, liquidity, market, sovereign debt, and interest rate risks. Our future investment income may fall short of expectations due to changes in interest rates or if the decline in fair value of our publicly traded debt or equity investments is judged to be other-than-temporary. These market risks associated with our investment portfolio may have a material adverse effect on our liquidity, financial condition, and results of operations.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated bylaws provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or if the Court of Chancery does not have jurisdiction, the U.S. District Court for the District of Delaware) is the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of fiduciary duty owed by any of our current or former directors, officers, or other employees to us or to our stockholders; (iii) any action asserting a claim arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation, or our bylaws; (iv) any action or proceeding asserting a claim as to which Delaware General Corporation Law confers jurisdiction on the Court of Chancery or (v) any action asserting a claim governed by the internal affairs doctrine. The exclusive forum provisions in our bylaws may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our current or former directors, officers, or other employees, which may discourage such lawsuits against us and our current or former directors, officers, and other employees. Alternatively, if a court were to find the exclusive forum provisions contained in our bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could have a material and adverse impact on our business.

Uninsured losses could harm our operating results.

We self-insure against many business risks and expenses, such as intellectual property litigation, cybersecurity and our medical benefit programs, where we believe we can adequately self-insure against the anticipated exposure and risk or where insurance is either not deemed cost-effective or is not available. We also maintain a program of insurance coverage for various types of property, casualty, and other risks. We place our insurance coverage with various carriers in numerous jurisdictions. The types and amounts of insurance that we obtain vary from time to time and from location to location, depending on availability, cost, and our decisions with respect to risk retention. The policies are subject to deductibles, policy limits, and exclusions that result in our retention of a level of risk on a self-insurance basis. In addition, our insurance coverage may not be adequate to compensate us for all losses or failures that may occur. Losses not covered by insurance could be substantial and unpredictable and could adversely affect our financial condition and results of operations.

Our stock price may fluctuate.

Historically, our common stock has experienced substantial price volatility, particularly as a result of variations between our actual financial results and the published expectations of analysts and as a result of announcements by our competitors and us. Furthermore, speculation in the press or investment community about our strategic position, financial condition, results of operations, business, security of our products, liabilities or significant transactions can cause changes in our stock price. In addition, the stock market has experienced extreme price and volume fluctuations that have affected the market price of many technology companies in particular and that have often been unrelated to the operating performance of these companies. From time to time, economic weakness has contributed to extreme price and volume fluctuations in global stock markets that have also reduced the market price of many technology company stocks, including ours. These factors, as well as general economic and political conditions and the announcement of proposed and completed acquisitions or other significant transactions, or any difficulties associated with such transactions, by us or our current or potential competitors, may materially adversely affect the market price of our common stock in the future.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides stock repurchase activity during the three months ended June 30, 2019 (in millions, except per share amounts):

Period	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share ⁽¹⁾	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs ⁽¹⁾
April 1 - April 30, 2019	8.6	\$ 27.94	8.6	\$ 1,010.0
May 1 - May 31, 2019	—	\$ —	—	\$ 1,010.0
June 1 - June 30, 2019	—	\$ —	—	\$ 1,010.0
Total	8.6	\$ —	8.6	

⁽¹⁾ Shares were repurchased under our Board approved 2018 Stock Repurchase Program, which authorized us to purchase an aggregate of up to \$2.0 billion of our common stock. Future share repurchases will be subject to a review of the circumstances in place at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements, including Rule 10b-18 promulgated under the Exchange Act. This program may be discontinued at any time. For the majority of restricted stock units granted, the number of shares issued on the date the restricted stock units vest is net of shares withheld to meet applicable tax withholding requirements. Although these withheld shares are not issued or considered common stock repurchases under our stock repurchase program and therefore are not included in the preceding table, they are treated as common stock repurchases in our financial statements as they reduce the number of shares that would have been issued upon vesting, see Note 10, *Equity*, in Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report.

As part of the 2018 Stock Repurchase Program, on April 29, 2019, we entered into the 2019 ASR to repurchase an aggregate of approximately \$300.0 million of our outstanding common stock. Under the ASR, we made an up-front payment of \$300.0 million pursuant to the ASR and received and retired an initial 8.6 million shares of our common stock for an aggregate price of \$240.0 million, based on the market price of \$27.94 per share of our common stock on the date of the transaction. The initial shares received by us were retired, accounted for as a reduction to stockholder's equity in the Condensed Consolidated Balance Sheets, and treated as a repurchase of common stock for purposes of calculating earnings per share. The forward contract for the remaining \$60.0 million is considered indexed to the Company's common stock and met all of the applicable criteria for equity classification. For further explanation of our ASR, see Note 10, *Equity*, in Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report.

Item 6. Exhibits

Exhibit Number	Description of Document
10.1	Credit Agreement, dated as of April 25, 2019, by and among Juniper Networks, Inc., the lenders from time to time party thereto and Citibank, N.A., as administrative agent (which is incorporated herein by reference to Exhibit 10.1 of the Registrant's Current Report on Form 10-Q filed on May 9, 2019)
10.2	Share Repurchase Transaction Agreement, dated April 29, 2019 between Juniper Networks, Inc. and J.P. Morgan Chase Bank, National Association (which is incorporated herein by reference to Exhibit 10.2 of the Registrant's Current Report on Form 10-Q filed on May 9, 2019)
10.3	Mist Systems, Inc. 2014 Equity Incentive Plan (which is incorporated herein by reference to Exhibit 99.1 of the Registrant's Form S-8-filed on April 2, 2019)
10.4	Amended and Restated Juniper Networks, Inc. 2015 Equity Incentive Plan*+
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934*
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934*
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350**
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350**
101	The following materials from Juniper Network Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, formatted in iXBRL (inline eXtensible Business Reporting Language): (i) the Condensed Consolidated Statements of Operations (ii) the Condensed Consolidated Statements of Comprehensive Income, (iii) the Condensed Consolidated Balance Sheets, (iv) the Condensed Consolidated Statements of Cash Flows, (v) the Condensed Consolidated Statements of Changes in Stockholders' Equity, and (vi) Notes to Condensed Consolidated Financial Statements, tagged as blocks of text*
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document*
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, formatted in Inline XBRL (included in Exhibit 101).

*Filed herewith.

**Furnished herewith.

+Indicates management contract or compensatory plan, contract or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned thereunto duly authorized.

Juniper Networks, Inc.

August 7, 2019 By: /s/ Kenneth B. Miller

Kenneth B. Miller

Executive Vice President, Chief Financial Officer and Chief Accounting Officer

(Duly Authorized Officer and Principal Financial Officer and Principal Accounting Officer)

JUNIPER NETWORKS, INC.

2015 EQUITY INCENTIVE PLAN

As amended and restated as of May 14, 2019

1. Purposes of the Plan. The Plan is intended to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Service Providers and to promote the success of the Company's business

The Plan permits the grant of Options, Restricted Stock, Restricted Stock Units, Stock Appreciation Rights, Performance Shares, Performance Units, Deferred Stock Units and Dividend Equivalents. The Plan also provides for the automatic, non-discretionary grant of certain Awards to Outside Directors as further specified herein.

2. Definitions. As used herein, the following definitions shall apply:

(a) “Administrator” means the Board or any of its Committees as shall be administering the Plan, in accordance with Section 4 of the Plan.

(b) “Applicable Laws” means the requirements relating to the administration of equity incentive plans, the grant of Awards and the related issuance of Shares under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and under the laws, rules and regulations of any foreign country or jurisdiction where Awards are, or will be, granted under the Plan or where Participants may reside and/or work, as such requirements shall be in place from time to time.

(c) “Award” means, individually or collectively, a grant under the Plan of Options, Restricted Stock, Restricted Stock Units, Stock Appreciation Rights, Performance Shares, Performance Units, Deferred Stock Units or Dividend Equivalents.

(d) “Award Agreement” means the written or electronic agreement, in such form as the Administrator prescribes from time to time, setting forth the terms and provisions applicable to each Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.

(e) “Board” means the Board of Directors of the Company.

(f) “Change in Control” means the occurrence of any of the following events:

(i) A change in the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group (“Person”), acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than fifty percent (50%) of the total voting power of the stock of the Company; provided, however, that for purposes of this subsection, the acquisition of additional stock by any Person, who is considered to own more than fifty percent (50%) of the total voting power of the stock of the Company will not be considered a Change in Control; or

(ii) A change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12) month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election; or

(iii) A change in the ownership of a substantial portion of the Company’s assets which occurs on the date that any Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company’s assets: (A) a transfer to an entity that is controlled by the Company’s stockholders immediately after the transfer (provided that such entity is controlled in substantially the same proportions by the Company’s stockholders who held the Company’s securities immediately before such transfer), or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for the Company’s stock (provided that the value of the Company’s stock exchanged for such assets shall be substantially equal to or greater than the value of such assets, as determined by the Board), (2) an entity, fifty percent (50%) or more of the total value or voting power of which is owned, directly or indirectly, by the Company, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (4) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, by a Person described in this subsection (iii)(B)(3). For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition, persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, to the extent required for compliance with Code Section 409A, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and Internal Revenue Service guidance that has been promulgated or may be promulgated thereunder from time to time.

Further and for the avoidance of doubt, a transaction will not constitute a Change in Control if: (i) its sole purpose is to change the state of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

(g) “Code” means the U.S. Internal Revenue Code of 1986, as amended.

(h) “Common Stock” means the common stock of the Company.

(i) “Committee” means a committee of Directors or of other individuals satisfying Applicable Laws appointed by the Board or a duly authorized committee of the Board, in accordance with Section 4(a) of the Plan.

(j) “Company” means Juniper Networks, Inc., a Delaware corporation, or any successor thereto.

(k) “Company Group” means the Company, any Parent or Subsidiary, and any entity that, from time to time and at the time of any determination, directly or indirectly, is in control of, is controlled by or is under common control with the Company.

(l) “Consultant” means any natural person engaged by the Company Group to render services and who is compensated for such services, but who is neither an Employee nor a Director; provided, that a Consultant will include only those persons to whom the issuance of Common Stock may be registered under Form S-8 under the U.S. Securities Act of 1933, as amended.

(m) “Continuous Status as a Director” means that the Director relationship is not interrupted or terminated.

(n) “Deferred Stock Unit” means a deferred stock unit Award granted to a Participant pursuant to Section 15.

(o) “Director” means a member of the Board.

(p) “Disability” means total and permanent disability as defined in Section 22(e)(3) of the Code, provided that in the case of Awards other than Incentive Stock Options, the Administrator in its discretion may determine whether a permanent and total disability exists in accordance with uniform and non-discriminatory standards adopted by the Administrator from time to time.

(q) “Dividend Equivalent” means a credit, payable in cash or Shares, made at the discretion of the Administrator, to the account of a Participant in an amount equal to the cash dividends paid on one Share for each Share represented by an Award held by such Participant. Any Dividend Equivalents credited with respect to a Share or unit subject to an Award shall be distributed in cash or Shares to the Participant only if, when and to the extent such Share or unit vests. The value of dividends and other distributions payable with respect to any Share or unit subject to an Award that does not vest shall be forfeited.

(r) “Effective Date” means May 19, 2015, the date the stockholders of the Company initially approved the 2015 Equity Incentive Plan.

(s) “Employee” means any person, including Officers and Directors, employed by the Company or any member of the Company Group. However, with respect to Incentive Stock Options, an Employee must be employed by the Company or any Parent or Subsidiary. Neither service as a Director nor payment of a director’s fee by the Company will be sufficient to constitute “employment” by the Company.

(t) “Exchange Act” means the U.S. Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(u) “Fair Market Value” means the closing sales price of Common Stock on the date of determination (or the mean of the closing bid and asked prices for the Common Stock if no sales were reported) as reported by the New York Stock Exchange or such other source as the Administrator deems to be reliable. Notwithstanding the foregoing, if the determination date for the Fair Market Value occurs on a weekend, holiday or other non-Trading Day, the Fair Market

Value will be the price as determined above on the immediately preceding Trading Day, unless otherwise determined by the Administrator. In addition, for purposes of determining the fair market value of Shares for any reason other than the determination of the exercise price of Options or Stock Appreciation Rights, fair market value will be determined by the Administrator in a manner compliant with Applicable Laws and applied consistently for such purpose. The determination of fair market value for purposes of tax withholding may be made in the Administrator's sole discretion subject to Applicable Laws and is not required to be consistent with the determination of Fair Market Value for other purposes.

(v) “Fiscal Year” means a fiscal year of the Company.

(w) “Full Value Award” means a grant of Restricted Stock, a Restricted Stock Unit, a Performance Share or a Deferred Stock Unit hereunder.

(x) “Incentive Stock Option” means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code.

(y) “Nonstatutory Stock Option” means an Option not intended to qualify as an Incentive Stock Option.

(z) “Officer” means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(aa) “Option” means a stock option granted pursuant to the Plan.

(bb) “Optioned Stock” means the Common Stock subject to an Option.

(cc) “Outside Director” means a Director who is not an Employee.

(dd) “Parent” means a “parent corporation”, whether now or hereafter existing, as defined in Section 424(e) of the Code.

(ee) “Participant” means the holder of an outstanding Award.

(ff) “ Performance Goals ” means the goal(s) (or combined goal(s)) determined by the Administrator (in its discretion) to be applicable to a Participant with respect to an Award. As determined by the Administrator, the performance measures for any performance period will be any one or more of the following objective performance criteria, applied to either the Company as a whole or, except with respect to stockholder return metrics, to a region, business unit, affiliate or business segment, and measured either on an absolute basis or relative to a pre-established target, to a previous period’s results or to a designated comparison group, and, with respect to financial metrics, which may be determined in accordance with United States Generally Accepted Accounting Principles (“ GAAP ”), in accordance with accounting principles established by the International Accounting Standards Board (“ IASB Principles ”) or which may be adjusted when established to exclude any items otherwise includable under GAAP or under IASB Principles: (i) cash flow (including operating cash flow or free cash flow), (ii) cash position, (iii) revenue (on an absolute basis or adjusted for currency effects), (iv) revenue growth, (v) contribution margin, (vi) gross margin, (vii) operating margin (viii) operating expenses or operating expenses as a percentage of revenue, (ix) earnings (which may include earnings before interest and taxes, earnings before taxes and net earnings), (x) earnings per share, (xi) operating income, (xii) net income, (xiii) stock price, (xiv) return on equity, (xv) total stockholder return, (xvi) growth in stockholder value relative to a specified publicly reported index (such as the S&P 500 Index), (xvii) return on capital, (xviii) return on assets or net assets, (xix) return on investment, (xx) economic value added, (xxi) operating profit or net operating profit, (xxii) operating margin, (xxiii) market share, (xxiv) contract awards or backlog, (xxv) overhead or other expense reduction, (xxvi) credit rating, (xxvii) objective customer indicators, (xxviii) new product invention or innovation, (xxix) attainment of research and development milestones, (xxx) improvements in productivity, (xxxi) attainment of objective operating goals, and (xxxii) objective employee metrics. The Performance Goals may differ from Participant to Participant and from Award to Award. In particular, the Administrator may appropriately adjust any evaluation of performance under a Performance Goal to exclude (a) any extraordinary non-recurring items, (b) the effect of any merger, acquisition, or other business combination or divestiture or (c) the effect of any changes in accounting principles affecting the Company’s or a business units’, region’s, affiliate’s or business segment’s reported results. Awards that are not intended to satisfy the performance-based compensation exception under Section 162(m) of the Code may take into account other factors (including subjective factors).

(gg) “ Performance Share ” means a performance share Award granted to a Participant pursuant to Section 13.

(hh) “ Performance Unit ” means a performance unit Award granted to a Participant pursuant to Section 14.

(ii) “Plan” means this 2015 Equity Incentive Plan, as amended and restated.

(jj) “Plan Minimum Vesting Requirements” means the minimum vesting requirements for Awards under Plan Section 4(b)(vi) hereunder.

(kk) “Restricted Stock” means a restricted stock Award granted to a Participant pursuant to Section 11.

(ll) “Restricted Stock Unit” means a bookkeeping entry representing an amount equal to the Fair Market Value of one Share, granted pursuant to Section 12. Each Restricted Stock Unit represents an unfunded and unsecured obligation of the Company, subject to the terms and conditions of the applicable Restricted Stock Unit Award Agreement, and each holder of a Restricted Stock Unit shall have no rights other than those of a general creditor of the Company.

(mm) “Rule 16b-3” means Rule 16b-3 of the Exchange Act or any successor to Rule 16b-3, as in effect when discretion is being exercised with respect to the Plan.

(nn) “Section 16(b)” means Section 16(b) of the Exchange Act.

(oo) “Section 409A” means Section 409A of the Code.

(pp) “Service Provider” means an Employee, Consultant or Director.

(qq) “Share” means a share of the Common Stock, as adjusted in accordance with Section 20 of the Plan.

(rr) “Stock Appreciation Right” or “SAR” means a stock appreciation right granted pursuant to Section 8 below.

(ss) “Subsidiary” means with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, owned by the

Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(tt) “Tax Obligations” means tax and social insurance liability obligations and requirements in connection with the Awards, including, without limitation, (A) all federal, state, and local taxes (including the Participant’s Federal Insurance Contributions Act (FICA) obligation or other payroll taxes) that are required to be withheld by an entity in the Company Group, (B) any fringe benefit tax liability the responsibility for which the Participant has, or has agreed to bear, with respect to such Award or the Shares subject to the Award, and (C) any other taxes of an entity in the Company Group the responsibility for which the Participant has, or has agreed to bear, with respect to such Award or the Shares subject to the Award).

(uu) “Trading Day” means a day on which the applicable stock exchange or national market system is open for trading.

3. Stock Subject to the Plan.

(a) Stock Subject to the Plan. Subject to the provisions of Section 20 of the Plan, the maximum aggregate number of Shares that may be issued under this Plan is equal to the sum of (i) 26,700,000 Shares, (ii) 38,000,000 Shares that, as of the Effective Date, had been reserved but not issued under the Company’s 2006 Equity Incentive Plan, as amended (the “2006 Plan”), and (iii) Shares subject to stock options or other awards granted under the 2006 Plan or the Company’s 1996 Stock Incentive Plan that, after the Effective Date, expire or otherwise terminate without having been vested or exercised in full, up to a maximum of 29,000,000 Shares. All of the Shares issuable under the Plan may be authorized, but unissued, or reacquired Common Stock.

(b) Share Conversion Ratio. Any Shares that are subject to Full Value Awards, Options, or SARs shall be counted against the numerical limits of this Section 3 as one Share for every Share subject thereto, provided that any Shares subject to Full Value Awards granted prior to May 14, 2019 with a per Share or unit purchase price lower than 100% of Fair Market Value on the date of grant shall be counted against the numerical limits of this Section 3 as two and one-tenth Shares for every one Share subject thereto. To the extent that a Share that was subject to an Award that counted as two and one-tenth Shares against the Plan reserve is recycled back into the Plan under the next paragraph of this Section 3, the Plan shall be credited with two and one-tenth Shares.

(c) Lapsed Awards. If an Award expires or becomes unexercisable without having been exercised in full, or, with respect to a Full Value Award, is forfeited to or repurchased by the Company at its original purchase price due to such Award failing to vest, the unpurchased Shares (or for Awards other than Options and SARs, the forfeited or repurchased Shares) which were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated). With respect to SARs, when an SAR is exercised, the Shares subject to a SAR Award Agreement shall be counted against the numerical limits of Section 3 above, as one Share for every Share subject thereto, regardless of the number of Shares used to settle the SAR upon exercise (i.e., Shares withheld to satisfy the exercise price of an SAR shall not remain available for issuance under the Plan). Shares that have actually been issued under the Plan under any Award shall not be returned to the Plan and shall not become available for future distribution under the Plan; provided, however, that if Shares of Full Value Awards are repurchased by the Company at their original purchase price or are forfeited to the Company due to such Awards failing to vest, such Shares shall become available for future grant under the Plan. Shares that are subject to an Option Award Agreement that are used to pay the exercise price of an Option shall not become available for future grant or sale under the Plan. Shares that are subject to an Award Agreement that are used to satisfy Tax Obligations shall not become available for future grant or sale under the Plan. To the extent an Award under the Plan is paid out in cash rather than stock, such cash payment shall not reduce the number of Shares available for issuance under the Plan. Any payout of Awards that are payable only in cash shall not reduce the number of Shares available for issuance under the Plan. Conversely, any forfeiture of Awards that are payable only in cash shall not increase the number of Shares available for issuance under the Plan. Notwithstanding the foregoing and, subject to adjustment as provided in Section 20, the maximum number of Shares that may be issued upon the exercise of Incentive Stock Options will equal the aggregate Share number stated in Section 3(a), plus, to the extent allowable under Section 422 of the Code and the Treasury Regulations thereunder, any Shares that become available for issuance under the Plan pursuant to Section 3(c).

4. Administration of the Plan.

(a) Procedure.

(i) Multiple Administrative Bodies. If permitted by Applicable Laws, the Plan may be administered by different Committees with respect to different groups of Service Providers.

(ii) Section 162(m). To the extent that the Administrator determines it to be desirable to qualify Awards granted hereunder as “performance-based compensation” within

the meaning of Section 162(m) of the Code, if applicable, the Plan shall be administered by a Committee consisting solely of two or more “outside directors” within the meaning of Section 162(m) of the Code.

(iii) Rule 16b-3. To the extent desirable to qualify transactions hereunder as exempt under Rule 16b-3, the Plan will be administered by a Committee constituted to comply with Rule 16b-3.

(iv) Administration With Respect to Other Persons. Other than as provided above, the Plan shall be administered by (A) the Board, (B) a committee designated by the Board, or (C) a sub-committee designated by the designated Committee, which Committee or sub-committee shall be constituted to satisfy Applicable Laws. Once appointed, such Committee shall serve in its designated capacity until otherwise directed by the Board. The Board may increase the size of the Committee and appoint additional members, remove members and substitute new members, fill vacancies, and remove all members of the Committee and thereafter directly administer the Plan, all to the extent permitted by Applicable Laws.

(v) Administration With Respect to Automatic Grants to Outside Directors. Automatic grants to Outside Directors shall be pursuant to Section 10 hereof and therefore shall not be subject to any discretionary administration.

(b) Powers of the Administrator. Subject to the provisions of the Plan (including the non-discretionary automatic grant to Outside Director provisions of Section 10), and in the case of a Committee, subject to the specific duties delegated by the Board to such Committee, the Administrator shall have the authority, in its discretion:

- (i) to determine the Fair Market Value in accordance with Section 2(u) of the Plan;
- (ii) to select the Service Providers to whom Awards may be granted hereunder;
- (iii) to determine whether and to what extent Awards are granted hereunder;

(iv) to determine the number of shares of Common Stock to be covered by each Award granted hereunder;

(v) to approve forms of agreement for use under the Plan, which, for the avoidance of doubt, need not be identical for each Participant or Award;

(vi) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards vest or may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions (subject to compliance with applicable laws, including Code Section 409A), and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Administrator, in its sole discretion, shall determine; provided, however, that, subject to Section 4(d), Awards may not vest earlier than the one (1) year anniversary of the grant date (except if accelerated (A) pursuant to Section 20 hereof or pursuant to change of control severance agreements entered into by and between the Company and any Service Provider, (B) due to a Participant's death, or (C) due to a Participant's Disability);

(vii) to construe and interpret the terms of the Plan, Awards granted pursuant to the Plan and any other agreement defining the rights and obligations of the Company and the Participants under the Plan;

(viii) to prescribe, amend and rescind rules and regulations relating to the Plan;

(ix) to modify or amend each Award (subject to Section 6(c) and Section 24(c) of the Plan);

(x) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator;

(xi) to determine the terms and restrictions applicable to Awards;

(xii) to determine whether Awards will be adjusted for Dividend Equivalents;

(xiii) to adopt such modifications, procedures, plans and sub-plans as may be necessary, desirable or appropriate to comply with provisions of the laws of the United States or any other country, to allow for tax-preferred treatment of Awards or otherwise provide for or facilitate the participation by Participants who reside outside of the United States, in order to assure the viability of the benefits of Awards made to Participants located in the United States or such other jurisdictions and to further the objectives of the Plan; and

(xiv) to make all other determinations deemed necessary or advisable for administering the Plan.

(c) Effect of Administrator's Decision. All decisions, determinations and interpretations of the Administrator shall be final and binding on all Participants and any other holders of any Awards granted under the Plan.

(d) Exception to Plan Minimum Vesting Requirements.

(i) Awards that result in issuing up to 5% of the maximum aggregate number of shares of Stock authorized for issuance under the Plan (the “5% Limit”) may be granted to any one or more Service Providers without respect to the Plan Minimum Vesting Requirements.

(ii) All Awards that have their vesting accelerated (A) pursuant to a Change in Control transaction described in Section 20(c) hereof (including vesting acceleration in connection with employment termination following such event), (B) due to a Participant's death, or (C) due to a Participant's Disability, shall not count against the 5% limit.

(iii) For the avoidance of doubt, if the Administrator accelerates the vesting of an Award but such acceleration does not result in the Plan Minimum Vesting Requirements not being satisfied for that Award, this acceleration will not count toward the 5% Limit.

5. Eligibility. Nonstatutory Stock Options, Restricted Stock, Restricted Stock Units, Stock Appreciation Rights, Performance Shares, Performance Units, Deferred Stock Units and Dividend Equivalents may be granted to Service Providers. Incentive Stock Options may be granted only to Employees. Notwithstanding the foregoing, Outside Directors may only be granted Awards as specified in Section 10 hereof.

6. Limitations.

(a) Award Limitations. Subject to adjustment as provided in Section 20, during any Fiscal Year, no Employee may be granted:

(i) Options and Stock Appreciation Rights to purchase more than 2,000,000 Shares; provided, however, that such limit shall be 4,000,000 Shares in the Employee's first Fiscal Year of Company service.

(ii) Restricted Stock and/or Performance Shares and/or Restricted Stock Units covering more than 1,000,000 Shares; provided, however, that such limit shall be 2,000,000 Shares in the Employee's first Fiscal Year of Company service.

(iii) Performance Units, having an initial value greater than \$2,000,000, provided, however, that such limit shall be \$4,000,000 in the Employee's first Fiscal Year of Company service.

(b) Outside Director Award Limitations. In any single Fiscal Year, no Outside Director may be granted one or more Awards (whether cash-settled or otherwise) with a grant date fair value (determined under U.S. generally accepted accounting principles), taken together with any cash fees paid to such Outside Director for service in such capacity during such Fiscal Year, of more than \$1,000,000. For the avoidance of doubt, neither Awards granted or compensation paid to an individual while he or she is an Employee, or while he or she was a Consultant but not an Outside Director, nor any amounts paid to an individual as a reimbursement of an expense shall count against the foregoing limitation.

(c) No Repricing. Without the consent of the Company's stockholders, (i) the exercise price for an Option or SAR may not be reduced and (ii) the Company may not pay cash or issue new Awards in exchange for the surrender and cancellation of any, or all, Options or SARs with an exercise price that is less than the current Fair Market Value. This shall include, without limitation, a repricing of the Option or SAR as well as an Option or SAR exchange program whereby the Participant agrees to cancel an existing Option or SAR in exchange for an Option, SAR or other Award. If an Option or SAR is cancelled in the same Fiscal Year in which it was granted (other than in connection with a transaction described in Section 20), the cancelled Option or SAR as well as any replacement Option or SAR will be counted against the limits set forth in

section 6(a)(i) above. Moreover, if the exercise price of an Option or SAR is reduced, the transaction will be treated as a cancellation of the Option or SAR and the grant of a new Option or SAR.

7. Stock Options.

(a) Type of Option. Each Option shall be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding such designations, to the extent that the aggregate Fair Market Value of Shares subject to a Participant's Incentive Stock Options granted by the Company, any Parent or Subsidiary, that become exercisable for the first time during any calendar year (under all plans of the Company or any Parent or Subsidiary) exceeds \$100,000, such excess Options shall be treated as Nonstatutory Stock Options. For purposes of this Section 7(a), Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of the Shares shall be determined as of the time of grant.

(b) Term of Option. The term of each Option shall be stated in the Award Agreement; provided, however, that the term shall be seven (7) years from the date of grant or such shorter term as may be provided in the Award Agreement. Moreover, in the case of an Incentive Stock Option granted to a Participant who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option shall be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(c) Exercise Price and Consideration.

(i) The per Share exercise price for the Shares to be issued pursuant to exercise of an Option shall be such price as is determined by the Administrator, but shall be subject to the following:

(1) In the case of an Incentive Stock Option

a) granted to an Employee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant.

b) granted to any Employee other than an Employee described in paragraph (a) immediately above, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.

(2) In the case of a Nonstatutory Stock Option, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.

(3) Notwithstanding the foregoing, Options may be granted with a per Share exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code.

(ii) The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall be determined by the Administrator and may consist entirely of cash; check; delivery of a properly executed exercise notice together with such other documentation as the Committee and the broker, if applicable, shall require to effect an exercise of the option and delivery to the Company of the sale proceeds required; or any combination of such methods of payment, or such other consideration and method of payment for the issuance of Shares to the extent permitted under Applicable Laws.

(iii) Expiration of Options. An Option granted under the Plan will expire upon the date determined by the Administrator and set forth in the Award Agreement.

8. Stock Appreciation Rights.

(a) Grant of SARs. Subject to the terms and conditions of the Plan, SARs may be granted to Participants at any time and from time to time as shall be determined by the Administrator, in its sole discretion. Subject to Section 6(a) hereof, the Administrator shall have complete discretion to determine the number of SARs granted to any Participant.

(b) Exercise Price and other Terms. The per share exercise price for the Shares to be issued pursuant to exercise of a SAR shall be determined by the Administrator and shall be no less than 100% of the Fair Market Value per share on the date of grant. Notwithstanding the foregoing, SARs may be granted with a per Share exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described

in, and in a manner consistent with, Section 424(a) of the Code. Otherwise, the Administrator, subject to the provisions of the Plan, shall have complete discretion to determine the terms and conditions of SARs granted under the Plan; provided, however, that no SAR may have a term of more than seven (7) years from the date of grant.

(c) Payment of SAR Amount. Upon exercise of a SAR, a Participant shall be entitled to receive payment from the Company in an amount determined by multiplying:

(i) The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times

(ii) The number of Shares with respect to which the SAR is exercised.

(d) Payment upon Exercise of SAR. At the discretion of the Administrator, but only as specified in the Award Agreement, payment for a SAR may be in cash, Shares or a combination thereof. If the Award Agreement is silent as to the form of payment, payment of the SAR may only be in Shares.

(e) SAR Agreement. Each SAR grant shall be evidenced by an Award Agreement that shall specify the exercise price, the term of the SAR, the conditions of exercise, whether it may be settled in cash, Shares or a combination thereof, and such other terms and conditions as the Administrator, in its sole discretion, shall determine.

(f) Expiration of SARs. A SAR granted under the Plan shall expire upon the date determined by the Administrator, in its sole discretion, and set forth in the Award Agreement.

9. Exercise of Option or SAR. Any Option or SAR granted hereunder shall be exercisable at such times and under such conditions as determined by the Administrator, including performance criteria with respect to the Company and/or the Participant, and as shall be permissible under the terms of the Plan. An Option or SAR shall be deemed to be exercised when written notice of such exercise has been given to the Company in accordance with the terms of the Option or SAR by the person entitled to exercise the Option or SAR and, with respect to Options only, full payment for the Shares with respect to which the Option is exercised has been received by the Company. With respect to Options only, full payment may, as authorized by the Administrator, consist of any consideration and method of payment allowable under Section 7(c) of the Plan. Until the issuance (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company or as evidenced by the issuance of a stock certificate) of the Shares, no right

to vote or receive dividends or any other rights as a stockholder of the Company shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. No adjustment will be made for a dividend or other right for which the record date is prior to the issuance of the Shares, except as provided in Section 20 of the Plan.

10. Automatic Grants to Outside Directors.

(a) Procedure for Grants. All grants of Awards to Outside Directors under this Plan shall be automatic and non-discretionary and shall be made strictly in accordance with the provisions in this Section 10:

(i) No person shall have any discretion to select which Outside Directors shall be granted Awards or to determine the number of Shares to be covered by Awards granted to Outside Directors.

(ii) At each of the Company's annual stockholder meetings beginning with the 2019 annual stockholder meeting, each Outside Director who is elected at (or whose term continues after) such meeting shall be automatically granted Restricted Stock Units for a number of Shares equal to the Annual Value (rounded down to the nearest whole share). Each award specified in this subsection (ii) is generically referred to as an "Annual Award". The "Annual Value" means, beginning with the 2019 annual stockholder meeting, the number equal to \$245,000 divided by the average daily closing price over the six month period ending on the last day of the fiscal year preceding the date of grant.

(iii) Each person who first becomes an Outside Director (including a Director who has transitioned from an employee Director to an Outside Director) on a date other than the date of the Company's annual stockholder meeting shall automatically be granted on the date such person becomes an Outside Director Restricted Stock Units (each such award specified in this subsection (iii) is referred to as an "Initial Award") for a number of Shares equal to a number determined by multiplying the Annual Value used for calculating the Annual Awards granted at the annual stockholder meeting immediately preceding the date of such Initial Award (the "Last Annual Meeting Date") by a fraction, the numerator of which is 365 minus the number of days between the Last Annual Meeting Date and the date the person first became or becomes an Outside Director and the denominator of which is 365, rounded down to the nearest whole Share.

(iv) Notwithstanding the provisions of subsections (ii) or (iii) hereof, in the event that an automatic grant hereunder would cause the number of Shares subject to outstanding Awards plus the number of Shares previously purchased upon exercise of Options or issued upon vesting of Restricted Stock Units or other Full Value Awards to exceed the number of Shares available for issuance under the Plan, then each such automatic grant shall be for that number of Shares determined by dividing the total number of Shares remaining available for grant by the number of Outside Directors receiving Awards on the applicable automatic grant date. Any further grants shall then be deferred until such time, if any, as additional Shares become available for grant under the Plan.

(v) Each Annual Award and Initial Award shall become 100% vested on the earlier of (A) the one year anniversary of the grant date, and (B) the day prior to the date of the Company's next annual stockholder meeting, subject in either case to the Participant maintaining Continuous Status as a Director through the vesting date.

(b) Reservation of Rights. The Board reserves the right to amend this Section 10, including to increase the limit on Annual Awards or Initial Awards or to provide for additional Awards to Outside Directors.

11. Restricted Stock.

(a) Grant of Restricted Stock. Subject to the terms and conditions of the Plan, the Administrator, at any time and from time to time, may grant Shares of Restricted Stock to Employees and Consultants as shall be determined by the Administrator, in its sole discretion. Subject to Section 6(a) hereof as well as the Plan Minimum Vesting Requirements, the Administrator shall have complete discretion to determine (i) the number of Shares subject to a Restricted Stock award granted to any Participant, and (ii) the conditions that must be satisfied, which typically will be based principally or solely on continued provision of services but may include a performance-based component.

(b) Restricted Stock Award Agreement. Each Restricted Stock grant shall be evidenced by an Award Agreement that shall specify the purchase price (if any), any vesting conditions, the number of Shares granted and such other terms and conditions as the Administrator, in its sole discretion, shall determine. Unless determined otherwise by the Administrator, the Company as escrow agent will hold Shares of Restricted Stock until the restrictions on such Shares, if any, have lapsed.

(c) Transferability. Except as provided in this Section 11, Section 18, or the Award Agreement, Shares of Restricted Stock may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable vesting period (if any).

(d) Other Restrictions. The Administrator, in its sole discretion, may impose such other restrictions on Shares of Restricted Stock as it may deem advisable or appropriate.

(e) Removal of Restrictions. Except as otherwise provided in this Section 11, Shares of Restricted Stock covered by each Restricted Stock grant made under the Plan will be released from escrow as soon as practicable after the last day of the vesting period or at such other time as the Administrator may determine. Subject to the Plan Minimum Vesting Requirements, the Administrator, in its discretion, may reduce or waive any vesting criteria and may accelerate the time at which any restrictions will lapse or be removed. The Administrator, in its discretion, may establish procedures regarding the release of Shares from escrow and/or removal of legends, as necessary or appropriate to minimize administrative burdens on the Company.

(f) Legend on Certificates. The Administrator, in its discretion, may require that one or more legends be placed on the certificates representing Restricted Stock to give appropriate notice of the applicable restrictions.

(g) Voting Rights. During the vesting period, Participants holding Shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those Shares, unless the Administrator determines otherwise.

(h) Dividends and Other Distributions. During the vesting period, Participants holding Shares of Restricted Stock will be credited with all dividends and other distributions paid with respect to such Shares, but such dividends and other distributions shall be distributed to the Participant only if, when and to the extent the Shares of Restricted Stock vest. The value of dividends and other distributions payable with respect to any Shares of Restricted Stock that do not vest shall be forfeited.

(i) Return of Restricted Stock to Company. On the date set forth in the Award Agreement, the Restricted Stock for which restrictions have not lapsed will revert to the Company.

12. Restricted Stock Units.

(a) Grant. Restricted Stock Units may be granted at any time and from time to time as determined by the Administrator. After the Administrator determines that it will grant

Restricted Stock Units under the Plan, it shall advise the Participant in writing or electronically of the terms, conditions, and restrictions related to the grant, including the number of Restricted Stock Units and the form of payout, which, subject to Section 6(a) hereof, may be left to the discretion of the Administrator. Until the Shares are issued, no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Restricted Stock Units to acquire Shares. Notwithstanding the foregoing, the Administrator, in its discretion, may provide in an Award Agreement evidencing any Restricted Stock Unit Award that a Participant shall be entitled to receive Dividend Equivalents (subject to the provisions of Section 2(f) with respect to Restricted Stock Units).

(b) Vesting Criteria and Other Terms. Subject to the Plan Minimum Vesting Requirements, the Administrator shall set vesting criteria in its discretion, which, depending on the extent to which the criteria are met, will determine the number of Restricted Stock Units that will be paid out to the Participant. The Administrator may set vesting criteria based upon the achievement of Company-wide, business unit, or individual goals (including, but not limited to, continued employment), or any other basis determined by the Administrator in its discretion.

(c) Earning Restricted Stock Units. Upon meeting the applicable vesting criteria, the Participant shall be entitled to receive a payout as specified in the Restricted Stock Unit Award Agreement. Notwithstanding the foregoing, at any time after the grant of Restricted Stock Units, the Administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

(d) Form and Timing of Payment. Payment of earned Restricted Stock Units shall be made as soon as practicable after the date(s) set forth in the Restricted Stock Unit Award Agreement. The Administrator, in its sole discretion, but only as specified in the Award Agreement, may pay earned Restricted Stock Units in cash, Shares, or a combination thereof. If the Award Agreement is silent as to the form of payment, payment of the Restricted Stock Units may only be in Shares.

(e) Cancellation. On the date set forth in the Restricted Stock Unit Award Agreement, all unearned Restricted Stock Units shall be forfeited to the Company.

13. Performance Shares.

(a) Grant of Performance Shares. Subject to the terms and conditions of the Plan, Performance Shares may be granted to Participants at any time as shall be determined by the Administrator, in its sole discretion. Subject to Section 6(a) hereof as well as the Plan Minimum Vesting Requirements, the Administrator shall have complete discretion to determine (i) the number of Shares subject to a Performance Share award granted to any Participant, and (ii) the conditions that must be satisfied, which typically will be based principally or solely on achievement of performance milestones but may include a service-based component, upon which is conditioned the grant or vesting of Performance Shares. Performance Shares shall be granted in the form of units to acquire Shares. Each such unit shall be the equivalent of one Share for purposes of determining the number of Shares subject to an Award. Until the Shares are issued, no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the units to acquire Shares.

(b) Other Terms. The Administrator, subject to the provisions of the Plan, shall have complete discretion to determine the terms and conditions of Performance Shares granted under the Plan. Performance Share grants shall be subject to the terms, conditions, and restrictions determined by the Administrator at the time the stock is awarded, which may include such performance-based milestones as are determined appropriate by the Administrator. The Administrator may require the recipient to sign a Performance Shares Award Agreement as a condition of the award. Any certificates representing the Shares of stock awarded shall bear such legends as shall be determined by the Administrator.

(c) Performance Share Award Agreement. Each Performance Share grant shall be evidenced by an Award Agreement that shall specify such other terms and conditions as the Administrator, in its sole discretion, shall determine.

14. Performance Units.

(a) Grant of Performance Units. Subject to the terms and conditions of the Plan, Performance Units may be granted to Participants at any time and from time to time as shall be determined by the Administrator, in its sole discretion. The Administrator shall have complete discretion to determine the conditions that must be satisfied, which typically will be based principally or solely on achievement of performance milestones but may include a service-based component, upon which is conditioned the grant or vesting of Performance Units. Performance Units shall be

granted in the form of units to acquire Shares. Each Performance Unit shall equal the cash equivalent of one Share of Common Stock and shall be settled in cash equal to the Fair Market Value of the underlying Shares, determined as of the vesting date. No right to vote or receive dividends or any other rights as a stockholder shall exist with respect to Performance Units or the cash payable thereunder.

(b) Number of Performance Units. Subject to Section 6(a) hereof, the Administrator will have complete discretion in determining the number of Performance Units granted to any Participant.

(c) Other Terms. The Administrator, subject to the provisions of the Plan, shall have complete discretion to determine the terms and conditions of Performance Units granted under the Plan. Performance Unit grants shall be subject to the terms, conditions, and restrictions determined by the Administrator at the time the grant is awarded, which may include such performance-based milestones as are determined appropriate by the Administrator. The Administrator may require the recipient to sign a Performance Unit agreement as a condition of the award. Any certificates representing the units awarded shall bear such legends as shall be determined by the Administrator.

(d) Performance Unit Award Agreement. Each Performance Unit grant shall be evidenced by an agreement that shall specify such terms and conditions as the Administrator, in its sole discretion, shall determine.

15. Deferred Stock Units.

(a) Description. Deferred Stock Units shall consist of a Restricted Stock, Restricted Stock Unit, Performance Share or Performance Unit Award that the Administrator, in its sole discretion permits to be paid out in installments or on a deferred basis, in accordance with rules and procedures established by the Administrator, subject to the Plan Minimum Vesting Requirements. Each Deferred Stock Unit represents an unfunded and unsecured obligation of the Company, subject to the terms and conditions of the applicable Deferred Stock Unit Award Agreement, and each holder of a Deferred Stock Unit shall have no rights other than those of a general creditor of the Company.

(b) Limits. Deferred Stock Units shall be subject to the annual limits applicable to the underlying Restricted Stock, Restricted Stock Unit, Performance Share or Performance Unit Award as set forth in Section 6 hereof.

16. Leaves of Absence/Transfer Between Locations/Change of Status. Awards will be subject to the Company's leave of absence policy adopted by the Administrator. A Participant will not cease to be a Service Provider in the case of (i) transfers between locations of the Company or other members of the Company Group, or (ii) a change in status from Employee to Consultant or vice versa.

17. Part-Time Service. Unless otherwise required by Applicable Laws, if as a condition to being permitted to work on a less than full-time basis, the Participant agrees that any service-based vesting of Awards granted hereunder shall be extended on a proportionate basis in connection with such transition to a less than a full-time basis, vesting shall be adjusted in accordance with such agreement. Such vesting shall be proportionately re-adjusted prospectively in the event that the Employee subsequently becomes regularly scheduled to work additional hours of service. Notwithstanding the foregoing, in no event shall vesting be extended beyond a point in time that would result in the imposition of taxation under Code Section 409A.

18. Non-Transferability of Awards. Except as determined otherwise by the Administrator in its sole discretion, Awards may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Participant, only by the Participant (or the Participant's guardian or legal representative).

19. Tax Provisions.

(a) Withholding Requirements. Prior to the delivery of any Shares or cash pursuant to an Award (or exercise thereof) or such earlier time as any Tax Obligations are due, the Company and/or any entity in the Company Group will have the power and the right to deduct or withhold, or require a Participant to remit to the Company and/or the appropriate entity in the Company Group, an amount sufficient to satisfy all Tax Obligations.

(b) Withholding Arrangements. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may designate the method or methods by which a Participant may satisfy such Tax Obligations. As determined by the Administrator in its discretion from time to time, these methods may include one or more of the following (A) paying cash, (B) having the Company withhold otherwise deliverable cash or Shares having a fair market value equal to the Tax Obligations, (C) delivering to the Company already-

owned Shares having a fair market value equal to the Tax Obligations, (d) selling a sufficient number of Shares otherwise deliverable to the Participant through such means as the Administrator may determine in its sole discretion (whether through a broker or otherwise) equal to the Tax Obligations, (e) retaining from salary or other amounts payable to the Participant cash having a sufficient value to satisfy the Tax Obligations, or (f) any other means which the Administrator, in its sole discretion, determines to both comply with Applicable Laws, and to be consistent with the purposes of the Plan. The amount of Tax Obligations will be deemed to include any amount that the Administrator agrees may be withheld at the time the election is made.

(c) Compliance with Section 409A. Each payment or benefit under this Plan and under each Award Agreement is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations. The Plan, each Award and each Award Agreement under the Plan is intended to be exempt from or otherwise meet the requirements of Section 409A and will be construed and interpreted, including but not limited with respect to ambiguities and/or ambiguous terms, in accordance with such intent, except as otherwise specifically determined in the sole discretion of the Administrator.

20. Adjustments; Dissolution or Liquidation; Merger or Change in Control.

(a) Changes in Capitalization. Subject to any required action by the stockholders of the Company, the number of shares of Common Stock covered by each outstanding Award, and the number of shares of Common Stock which have been authorized for issuance under the Plan but as to which no Awards have yet been granted or which have been returned to the Plan upon cancellation or expiration of an Award, as well as the price per share of Common Stock covered by each such outstanding Award, the annual share limitations under Sections 6(a) and (b) hereof, and the number of Shares subject to Annual Award grants to Outside Directors under Section 10 hereof shall be proportionately adjusted for any increase or decrease in the number of issued shares of Common Stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the Common Stock, or any other increase or decrease in the number of issued shares of Common Stock effected without receipt of consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been “effected without receipt of consideration.” Such adjustment shall be made by the Board, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Common Stock subject to an Award. Except as otherwise expressly provided herein or pursuant to an Award Agreement, no adjustment of any Award shall be made for cash dividends or other rights for which the record date occurs prior to the date issuance of any Shares subject to such Award.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator shall notify each Participant as soon as practicable prior to the effective date of such proposed transaction. The Administrator in its discretion may provide for a Participant to have the right to exercise his or her Option or SAR for a period prior to such transaction determined by the Administrator in its sole discretion as to all of the Shares covered by such Awards, including Shares as to which the Award would not otherwise be exercisable. In addition, the Administrator may provide that any Company repurchase option or forfeiture rights applicable to any Award shall lapse 100%, and that any Award vesting shall accelerate 100%, provided the proposed dissolution or liquidation takes place at the time and in the manner contemplated. To the extent it has not been previously exercised (with respect to Options and SARs) or vested (with respect to other Awards), an Award will terminate immediately prior to the consummation of such proposed action.

(c) Change in Control.

(i) Stock Options and SARs. In the event of a merger of the Company with or into another corporation or other entity or a Change in Control, each outstanding Option and SAR shall be assumed or an equivalent Option or SAR substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the Option or SAR, the Participant shall fully vest in and have the right to exercise the Option or SAR as to all of the Shares covered by such Award (or shall vest at such other level(s) provided in an Award Agreement with respect to Awards that are assumed or substituted (whether or not actually assumed or substituted)), including Shares as to which it would not otherwise be vested or exercisable. If an Option or SAR becomes fully vested and exercisable in lieu of assumption or substitution in the event of a merger or Change in Control, the Administrator shall notify the Participant in writing or electronically that the Option or SAR shall be fully vested and exercisable for a period of time of time determined by the Administrator in its sole discretion, and the Option or SAR shall terminate upon the expiration of such period.

(ii) Full Value Awards and Dividend Equivalents. In the event of a merger of the Company with or into another corporation or entity or a Change in Control, each outstanding Full Value Award and Dividend Equivalent shall be assumed or an equivalent Full Value Award or Dividend Equivalent substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the Full Value Awards or Dividend Equivalents, the Participant shall fully vest (or shall vest at such other level(s) as provided in an Award Agreement with respect to Awards that are assumed or substituted (whether or not actually assumed or substituted)) in such Full Value Awards

or Dividend Equivalents which would not otherwise be vested. For purposes of this paragraph, except as otherwise contemplated in an Award Agreement, a Full Value Award and Dividend Equivalent shall be considered assumed if, following the merger or Change in Control, the award confers the right to purchase or receive, for each Share (or with respect to Dividend Equivalents and Performance Units, the cash equivalent thereof) subject to the Award immediately prior to the transaction, the consideration (whether stock, cash, or other securities or property) received in the transaction by holders of the Company's common stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the merger or Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received, for each Share and each unit/right to acquire a Share subject to the Award (other than Dividend Equivalents and Performance Units) to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of the Company's common stock in the merger or Change in Control.

21. No Effect on Employment or Service. Neither the Plan nor any Award will confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider, nor will they interfere in any way with the Participant's right or the employing entity's right to terminate such relationship at any time, with or without cause. A Participant's rights, if any, in respect of or in connection with any Award are derived solely from the discretionary decision of the Company to permit the Participant to participate in the Plan and to benefit from a discretionary Award. By accepting an Award hereunder, a Participant expressly acknowledges and agrees that there is no obligation on the part of the Company to continue the Plan and/or grant any additional Awards. Any Award granted hereunder is not intended to be compensation of a continuing or recurring nature, or part of a Participant's normal or expected compensation, and in no way represents any portion of a Participant's salary, compensation, or other remuneration for purposes of pension, benefits, severance, redundancy, resignation or any other purpose.

22. Time of Granting Awards. The date of grant of an Award shall, for all purposes, be the date on which the Administrator makes the determination granting such Award (or such later grant effective date authorized by the Administrator). Notice of the determination shall be given to each Service Provider to whom an Award is so granted within a reasonable time after the date of such grant.

23. Term of Plan. Unless sooner terminated under Section 24, the Plan will continue in effect until March 26, 2025.

24. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Board may at any time amend, alter, suspend or terminate the Plan.

(b) Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company at the 2019 annual meeting of stockholders. In addition, any subsequent amendment to the Plan for which stockholder approval is required by Applicable Laws shall require stockholder approval. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

(c) Effect of Amendment or Termination. No amendment, alteration, suspension or termination of the Plan shall impair the rights of any Participant, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company.

25. Conditions Upon Issuance of Shares.

(a) Legal Compliance. The granting of Awards and the issuance and delivery of Shares under the Plan shall be subject to all Applicable Laws, and to such approvals by any governmental agencies or national securities exchanges as may be required. Subject to compliance with, or exception from Code Section 409A, Shares will not be issued pursuant to the exercise or vesting of an Award unless the exercise or vesting of such Award and the issuance and delivery of such Shares will comply with Applicable Laws, and may be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise or payout, as applicable, of an Award, the Company may require the person exercising such Option or SAR, or in the case of another Award (other than a Dividend Equivalent paid in cash or Performance Unit), the person receiving the Shares upon vesting, to render to the Company a written statement containing such representations and warranties as, in the opinion of counsel for the Company, may be required to ensure compliance with any of the aforementioned relevant provisions of law, including a representation that the Shares are being acquired only for investment and without any present intention to sell or distribute such Shares, if, in the opinion of counsel for the Company, such a representation is required.

26. Reservation of Shares. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements

of the Plan. Inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.

27. Miscellaneous.

(a) Severability. If a court of competent jurisdiction holds any provision invalid and unenforceable, the remaining provisions of the Plan shall continue in effect.

(b) Construction. Captions and titles contained herein are for convenience only and shall not affect the meaning or interpretation of any provision of the Plan. Except when otherwise indicated by the context, the singular shall include the plural and the plural shall include the singular. Use of the term "or" is not intended to be exclusive, unless the context clearly requires otherwise.

(c) Clawback. An Award granted under the Plan will be subject to any provisions of Applicable Laws providing for the recoupment or clawback of incentive compensation (or any Company policy adopted to comply with Applicable Laws); the terms of any Company recoupment, clawback or similar policy in effect; and any recoupment, clawback or similar provisions that may be included in the applicable Award Agreement.

(d) Fractional Shares. The Company shall not be required to issue fractional shares upon the exercise or settlement of any Award.

**Certification of Principal Executive Officer
Pursuant to
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002**

I, Rami Rahim, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Juniper Networks, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2019

/s/ Rami Rahim

Rami Rahim

Chief Executive Officer

(Principal Executive Officer)

**Certification of Principal Financial Officer
Pursuant to
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002**

I, Kenneth B. Miller, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Juniper Networks, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2019

/s/ Kenneth B. Miller

Kenneth B. Miller

Executive Vice President, Chief Financial Officer and Chief Accounting Officer
(Principal Financial Officer)

**Certification of Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350 As Adopted
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

I, Rami Rahim, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Juniper Networks, Inc. on Form 10-Q for the three months ended June 30, 2019, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Juniper Networks, Inc.

/s/ Rami Rahim

Rami Rahim

Chief Executive Officer

August 7, 2019

**Certification of Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350 As Adopted
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

I, Kenneth B. Miller, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Juniper Networks, Inc. on Form 10-Q for the three months ended June 30, 2019, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Juniper Networks, Inc.

/s/ Kenneth B. Miller

Kenneth B. Miller

Executive Vice President, Chief Financial Officer and Chief Accounting Officer

August 7, 2019